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EVEL ONE

WHOLE EARTH REVIEW

ACCESS TO OOLS & IDEAS

THE RIGHTS OF ROBOTS P. 2

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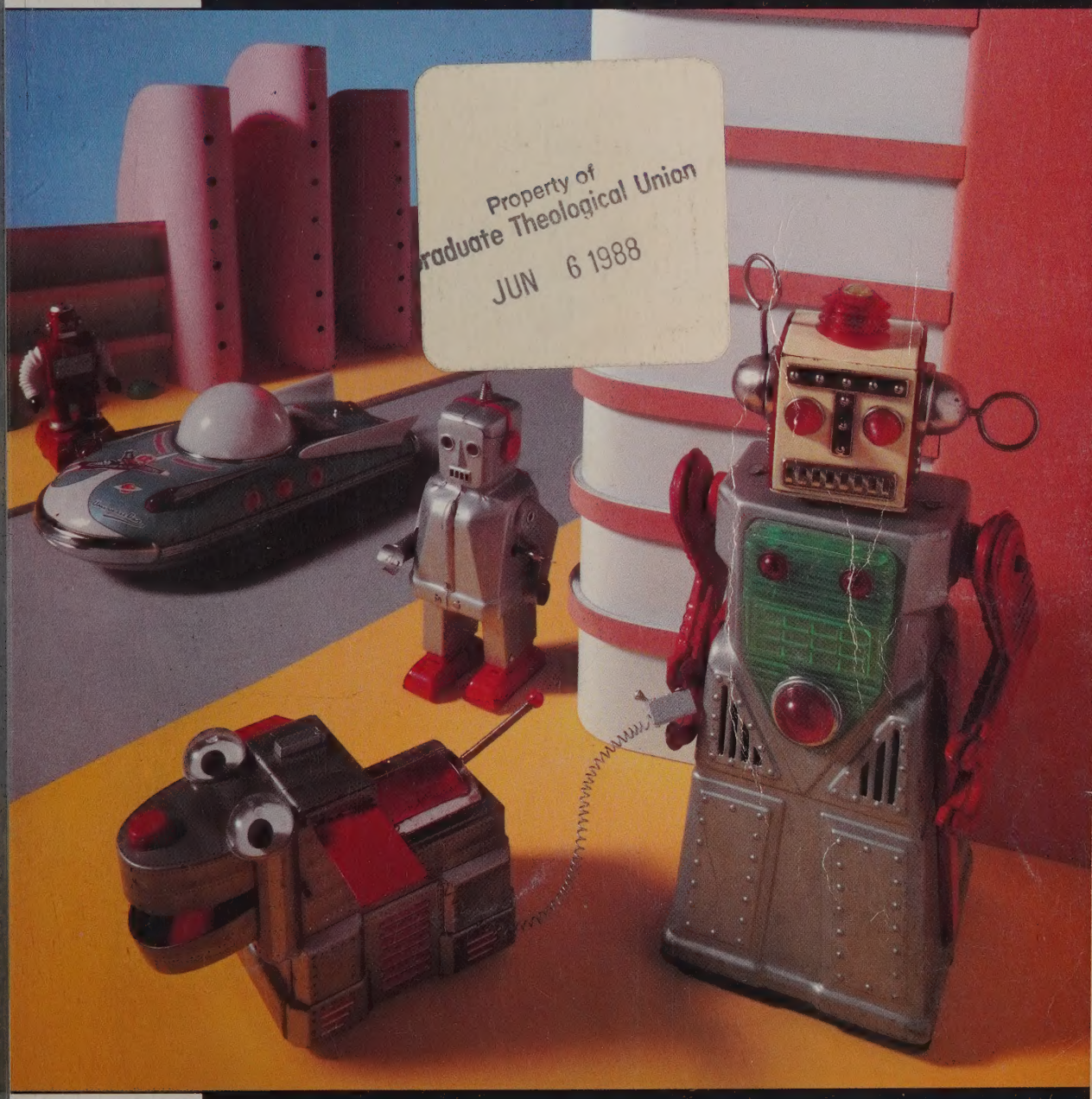

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COVER: Robert is out for a stroll with a robot's best friend, Robot Dog; Sparky rounds the corner while Remote Control Robot attempts to hail a Universe Car.

From "Robot 1985" calendar. Photo by Chuck Carlston, design/art direction by Douglass Grimmett. —Kevin Kelly

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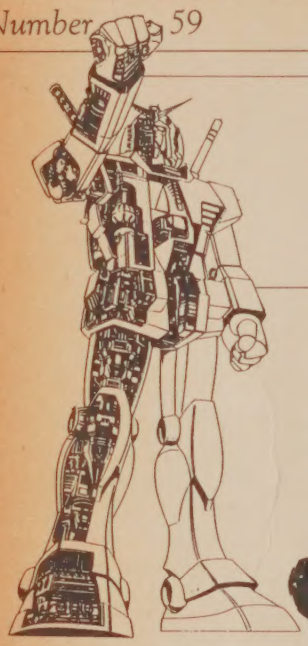

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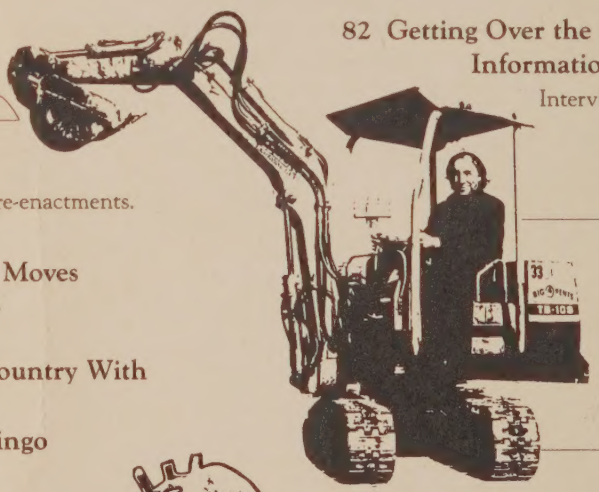

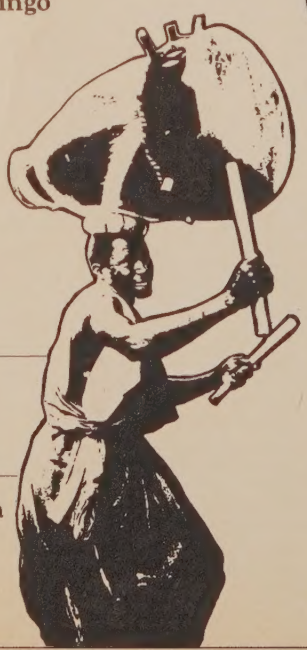

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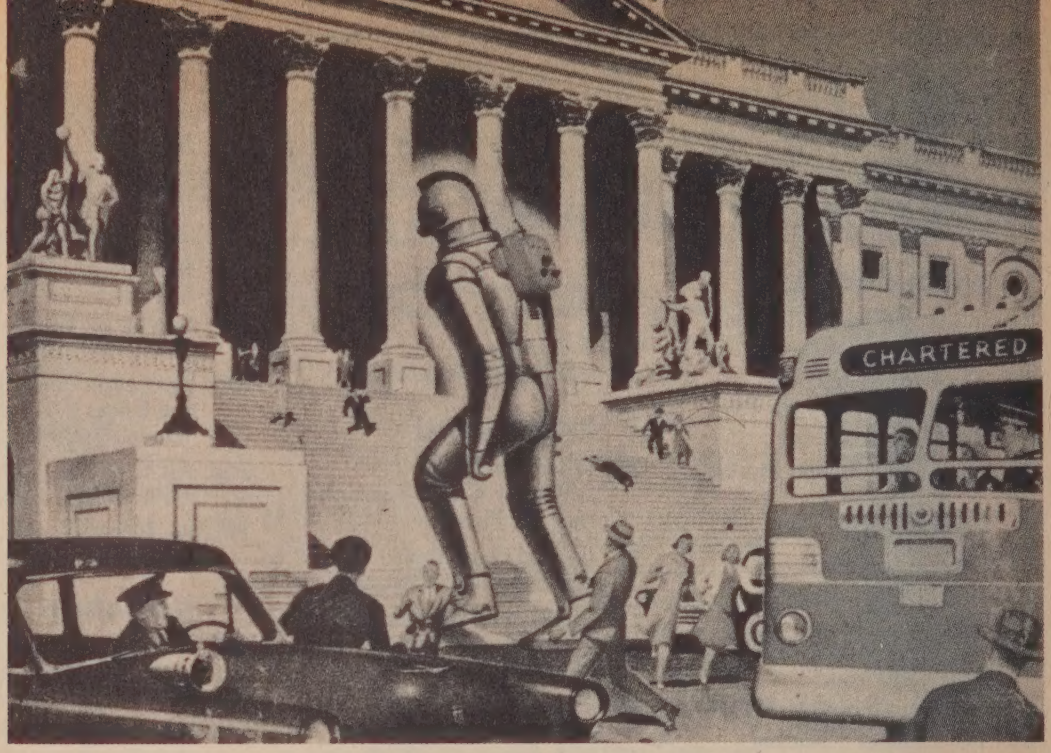


The Robot Book

THE RIGHTS OF ROBOTS

BY PHIL McNALLY AND SOHAIL INAYATULLAH

THE PREDICTABLE response to the question, "Should robots have rights?" has been one of disbelief. Those in government often question the intent or credibility of such research. Many futurists, too, especially those concerned with environmental or humanistic futures, react unfavorably. They assume that we are unaware of the second- and third-order effects of robotics — the potential economic dislocations, the strengthening of the world capitalist system, and the development of belief systems that view the human brain as only a special type of computer.

Why then, in the face of constant cynicism, should we pursue such a topic? We believe that the development of robots and their emerging rights are compelling issues which will significantly and dramatically affect not only the judicial and criminal justice system, but also the philosophical and political ideas that govern our societal institutions.

In the coming decades, and perhaps even within a few years, sophisticated thinking devices will be developed and installed in self-propelled casings which will be called "robots." Presently, robots are typically viewed as machines — as inanimate objects and, therefore, devoid of rights. Since robots have restricted mobility, must be artificially programmed for "thought," lack senses as well as the emotions associated with them, and most importantly cannot experience suffering or fear, it is argued that they lack the essential attributes to be considered "alive." However, the robot of tomorrow will undoubtedly have many of these characteristics and may perhaps become an intimate companion to its human counterpart.

We believe that robots will one day have rights. This will undoubtedly be a historically significant event. Such an extension of rights obviously presupposes a future that will be fundamentally different from the present. The expansion of rights to robots may promote a new appreciation of the interrelated rights and responsibilities of humans, machines and nature.

Phil McNally and Sohail Inayatullah are employed by the Hawaii Judiciary (and other public and private agencies) as strategic planners/futurists. They presented a heftier, more legally complete version of this report to the Hawaii Supreme Court. The full document and correspondence are available from them at P. O. Box 2650, Honolulu, HI 96804. —Kevin Kelly

With such an holistic extension of rights to all things in nature, from animals and trees to oceans, comes a renewed sense of responsibility, obligation and respect for all things. Certainly these concepts are foreign to the worldview of most of us today. The burden of this article is then to convince the reader that there is strong possibility that, within the next 25 to 50 years, robots will have rights.

Cultural Perspectives

Historically, humanity has developed ethnocentric and egocentric views of rights. Many notions of "rights" reflect the 16th-century views of Newton's clockwork universe and Descartes' rationality as well as the emerging Protestant ethic. The impact of such views upon thinkers of the Enlightenment like John Locke, Jean Jacques Rousseau and Thomas Hobbes was profound. In *Leviathan,* Hobbes vividly illustrated the problem of existence. For Hobbes, life without legal rights (as provided by governing institutions) was one of "continual fear, of violent death; with the life of man, solitary, poor, nasty, brutish and short."[1] With the development of Western capitalism and rationality, suddenly man assumed dominance over nature and replaced God as the center of the universe. Thus, natural rights of man became institutionalized, bureaucratized and formalized and, like legal systems, developed along rational lines so as to provide the necessary stability and predictability for the growth of market capitalism.

In addition, this Western capitalistic notion of governance led to the loss of individual efficacy as well as the elimination or subjugation of rights of nature, women, non-whites, and religious groups. For capitalism to thrive, for surplus to be appropriated, a division of capital, labor and resources must exist; that is, there must be capitalists who exploit and an underclass — the environment, the internal proletariat and the external colonies — which must be exploited. To provide an ideological justification of exploitation, it was necessary to perceive the exploited as the "other," as less than human, as less than the agents of dominance. Thus, nature, those in the colonies and the underclass within industrialized nations (women and the proletariat) had to be denied certain rights. The denial of rights for nature, in addition, found its ideological justification in Christianity and the classical Cartesian separation in Western thought between mind/body, self/environment and self/nature. Similarly and unfortunately, from our perspective, the possibility of robotic rights in the future is tied to the expansion of the world capitalist system. Robots will gain rights only insofar as such an event will lead to the further strengthening of the capitalist system. Most likely they will gain rights during a system crisis, when the system is threatened by anarchy and legal unpredictability — a condition that paradoxically may result from developments in artificial intelligence and robotics.

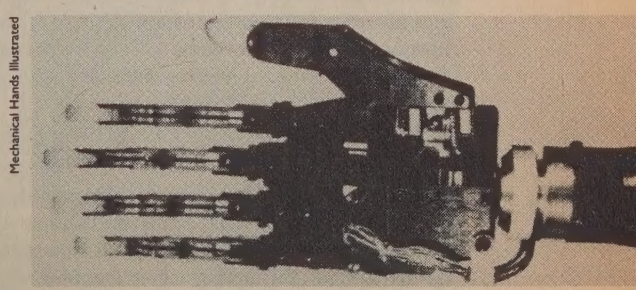
Other cultures, however, provide a different if not fresh perception of the meaning and purpose of rights that is in marked contrast to the historical and present Western position. For example, American Indian Jamake Highwater states in *The Primal Mind,* "whites are extremely devoted to limiting the rights of individuals and preventing anarchy, which is greatly feared in individualized cultures . . . by contrast the Indian, generally speaking, does not recognize the individual and therefore has not formulated strict regulations for its control."[2]

The Indian recognizes the collective. This collective is more than the aggregate of individuals in his tribe. It is rocks, trees, sacred grounds, animals — the universe itself. Thus, for the Indian, there exists a harmony between Nature and the individual; a relationship characterized by sharing, caring and gratitude, not dominance.

Chinese cultural attitudes toward the notion of rights also offer a decidedly different approach from that of the West. From this perspective, the legal norms of rights, established by man, are held as secondary to natural rights. Clarence Morris, in *The Justification of the Law,* argues that for the Chinese, harmony is more important than dominance. For example, "few Chinese scholars prize law in general or the imperial codes in particular: most of them hold that proper conduct is consonant with the cosmic order and therefore is determined not by law but by natural propriety."[3]

Morris continues in the vein of natural law noting that "we live in an unsuperstitious world — in which enforceable legal obligations (are) human artifices, and the laws of nature, in themselves, (do) not indicate where earthly rights (lie) — man inevitably (has given) up the primitive practice of prosecuting brutes and things. So beasts and trees no longer (have) any legal duties. *Westerners who gave up the conceit that nature had no legal duties also became convinced that nature has no legal rights."*

Morris believes that nature should be a party to any case, not for man's purpose but for its purpose. Nature should have rights. "Nature should no longer be dislocated on whim or without forethought about the harm that may ensue; he who proposes dislocation should justify it before he starts." Certain authorities



In this all-electric mechanical hand, every finger has a motor and cooperative operation is possible. Ranges for fingers are 90° for thumb internal and external rotation, 90° for thumb grasping, and 180° for other fingers grasping. Fingers open and shut the same as human fingers.

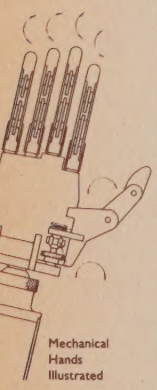
should then be designated as nature's guardians in the same way that children who cannot represent themselves have guardians. In addition, Morris writes: "When legal rights are, by statute, conferred on feral beasts, green forests, outcroppings of stone, and sweet air, and when these legal rights are taken seriously, men will respect these duties in much the same way as they respect their other legal obligations."

Nature and Robots

This neo-humanistic type of thinking can and, we believe, should apply to robots as well. Eventually humans may see robots in their own right, not only as our mechanical slaves, not only as our products, as ours to buy and sell, but also entities in their own right. Of course, at present the notion of robots with rights is unthinkable, whether one argues from an "everything is alive" Eastern perspective or "only man is alive" Western perspective. Yet as Christopher Stone argues in *Should Trees Have Standing? — Toward Legal Rights for Natural Objects,* "throughout legal history, each successive extension of rights to some new entity has been, theretofore, a bit unthinkable. We are inclined to suppose the rightlessness of rightless 'things' to be a decree of Nature, not a legal convention acting in support of some status quo."[4]

Stone reminds us of the obvious but easily forgotten. Human history is the history of exclusion and power. Humans have defined numerous groups as less than human: slaves, women, the "other races," children and foreigners. These are the wretched who have been defined as stateless, as personless, as suspect, as rightless. This is the present realm of robotic rights.

The concept of extending rights to nature represents a dialectical return to a holistic sense of natural rights. Once a renewed respect for the rights of all things to exist is established, then an understanding of the legal dimensions of human-made creations, such as robots, can emerge.



Mechanical Hands Illustrated

As we enter a postindustrial, technology-driven society, we need to reassess our interconnected relationship with nature and machines as well as the notions of rights associated with this new relationship. Presently, the foundation of the American Constitution and the Bill of Rights "obviously reflects the technological and political issues of 18th-century English society . . . what we continue to do is restructure and reinterpret it to fit an ever more rapidly evolving technological society."[5] Perhaps what we really need to do is to rewrite (or video) the Constitution in the light of future trends and issues.

The Constitution could be rewritten to include the rights of trees and streams, robots and humans. Of course, we are not arguing that robots should have the same rights as humans; rather, that they are seen as an integral part of the known universe. In addition, although we are not advocating the worship of technology, yet with "the genie of technology having been let out of the bottle and (as it) can't be forced back in,"[6] social planning for robots must be attempted.

Robot Technology

At the vanguard of computer technology is the development of artificial intelligence (AI) and the creation of living computer circuitry called "biochips." The development of AI requires the computer to make a jump in inference, a quantum leap over miscellaneous data, something a programmed machine has been unable to do. Literally, the computer must skip variables rather than measure each one. It is not quite a mirror of the human "Eureka!", but similar.

The development of living biochips will further blur the definition of a living machine. By synthesizing living bacteria, scientists have found a way to program the bacteria's genetic development to mimic the on-and-off switching of electronic circuitry. Many scientists currently feel silicon miniaturization has reached its limit because of the internal heat that the chips generate. The biochip is expected to greatly expand the capabilities of computerization by reaching the ultimate in miniaturization. Biochips will also have the unique ability to correct design flaws. Moreover, James McAlear of Gentronix Labs notes, "because proteins have the ability to assemble themselves the (organic) computer would more or less put itself together."[7]

In the creation of a living computer system "we are," according to Kevin Ulmer of The Genex Corporation, "making a computer from the very stuff of life." It is expected that eventually these systems will be so miniaturized that they may be planted in humans so as to regulate chemical and systemic imbalances. As these chips are used to operate mechanical arms, or negate brain or nerve damage, the issue of man-robots, cyborgs, will arise. The development of such organic computers is expected in the early 1990s. This new technological development will force a redefinition of our concept of life.

During this explosive era of high-tech innovation, contact between machines with artificial intelligence and humans will rapidly increase. Computer-intelligent devices, especially expert systems, are now making decisions in medicine, oil exploration, space travel, air traffic control, train conduction, and graphic design, to mention a few areas of impact.

The greatest attribute of an expert system is its infinite ability to store the most minute information and its tremendous speed at recalling and cross-referencing information to make instantaneous conclusions. The greatest drawback will be in convincing people to trust the computers' decisions. This mistrust, however, will be significantly reduced as robots in human form (voice, smell, sight, shape) — androids — are developed.

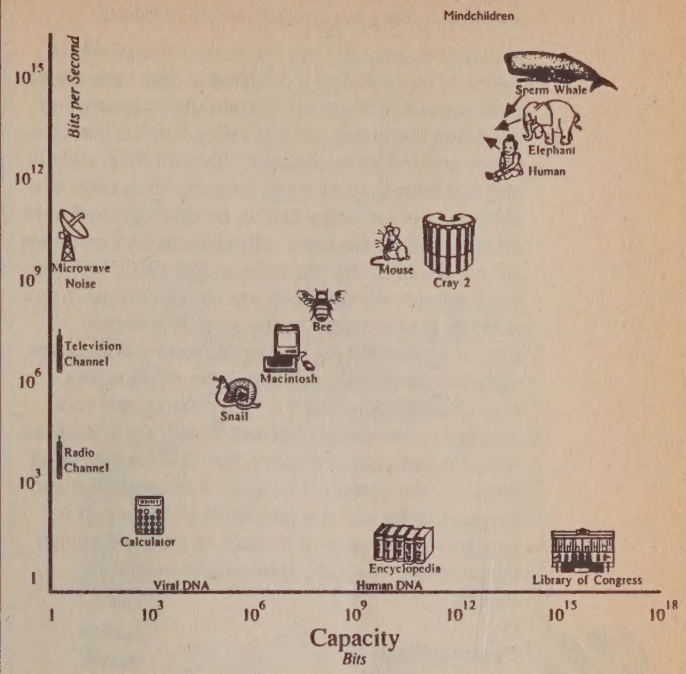
In deciding if computers can make experts' decisions, we must first delineate the attributes of an expert. Randall Davis of MIT provides the following defini-

tion: "(1) they can solve problems; (2) they can explain results; (3) they can learn by experience; (4) they can restructure their knowledge; (5) they are able to break rules when necessary; (6) they can determine relevance; and (7) their performing degrades gracefully as they reach the limits of their knowledge." Presently computers are capable of achieving the first three stages but cannot reprogram themselves or break rules, a decidedly human trait.

Are Robots Alive?

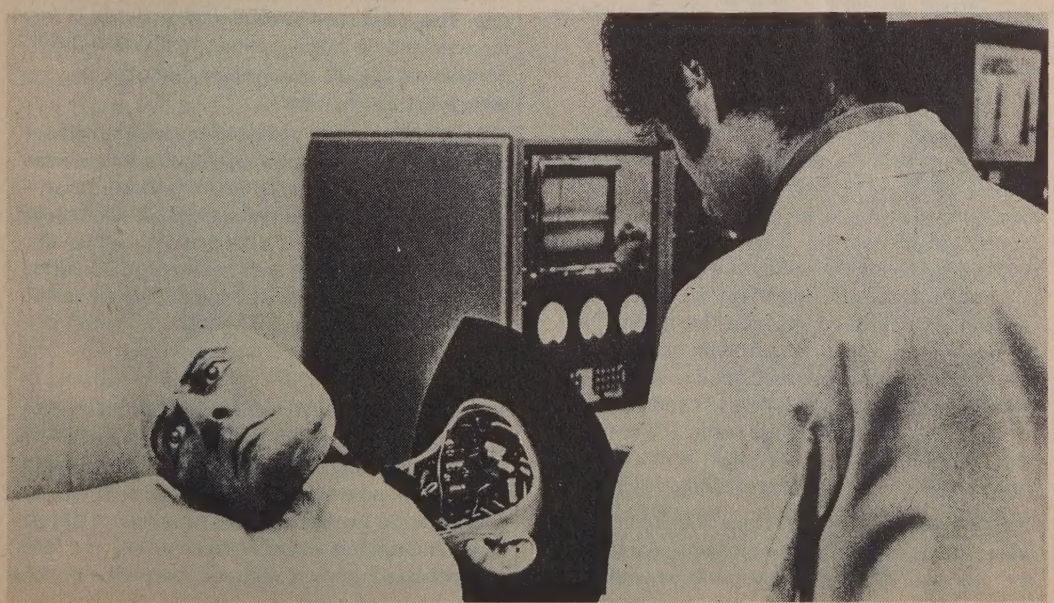
AI enthusiasts seriously argue that not only do robots have the theoretical possibility of "life" but inevitably will be perceived as alive. It is only our anthropocentric worldview, our insistence that life must be judged strictly on human terms as evidenced, for instance, by the structural bias in our language, that prevents us from understanding the similarity of robots — now and in the future — to humans. Of course, there are numerous arguments against this perspective. From the Western religious view, Man's soul is given directly to God; robots are soulless, thus, dead and thereby rightless. From a humanistic perspective, only by the clever use of language — comparing our brains to robots' memories, and other reductionist arguments — can it be argued that robots are alive. Aliveness is flesh and bones, aliveness is blood. Thus, robots remain dead, complex machines that can be made to act and look like humans, but will always remain as robots, not humans. As in the case of B. F. Skinner's pigeons which were trained to hit a ping-pong ball back and forth, we should not be fooled to believe that they are really "playing" ping-pong.

However compelling these arguments against robots-as-humans, they may lose some of their instinctive truth once computers and robots increasingly become



The intelligence of organisms, graphed as the intersection of their calculating speed versus capacity of information.

a part of our life, as we slowly renegotiate the boundaries between us and them. We have seen this with household pets, who certainly are perceived as having human traits and who have certain rights. Of course, the notion that dogs and cats have rights is contentious, since it can be argued that cruelty-to-animal statutes only confer a right on the human public, represented by the State, to have a culprit punished. Conversely, it can be argued that humans



Robots are mended at night in the laboratory in *Westworld*, a film depicting people living out their fantasies in a robot Disneyland.

are simply acting as agents of interest and that animals themselves are the real parties of interest.

In addition, arguing from the perspective of robots' rights, AI and robotics are relatively new innovations. If we assume that growth in computer memory and reasoning continues, we can safely forecast that computers and robots by the year 2100 will differ only in physical form from humans. Already, computers that perform psychotherapy cannot be distinguished from doctors who do the same, although clearly computers are not thinking. For example, in the 1960s MIT professor Joseph Weizenbaum invented a computer program (ELIZA) to parody a therapist in a doctor-patient format picking up key phrases, making grammatical substitutions and providing encouraging noncommittal responses. "Weizenbaum was soon shocked to see people become emotionally involved with the computer, believing that ELIZA understood them . . . the computer program had properties and powers that he had not anticipated."[8] Nor had he anticipated the need of humans to attribute human characteristics to gods, animals and inanimate objects.

Mechanical Hands Illustrated

Defining Rights

According to Christopher Stone, for a thing to be a holder of legal rights, the following criteria must be satisfied: (1) the thing can institute legal actions *at its behest;* (2) that in determining the granting of legal relief, the Court must take *injury to it* into account; and the relief must run to the *benefit of it.* If these conditions are satisfied, then the thing counts jurally; it has legally recognized worth and dignity for its own sake.

For example, writes Stone, the action of an owner suing and collecting damages if his slave is beaten is quite different from the slave instituting legal actions himself, for his own recovery, because of his pain and suffering. Of course, a suit could be brought by a guardian in the subject's name in the case of a child or a robot, for the child's or robot's sake, for damages to it.

This is equally true for nature. We cannot always rely on individuals to protect nature, as they may not have standing and as it may not be cost-effective for an individual owner to, for example, sue for damages for downstream pollution. However, a stream may be protected by giving it legal rights. If nature had rights, courts then would not only weigh the concerns of the polluter with that of the individual plaintiff but the rights of the stream as well. With nature rightless, courts presently can rule that it is in the greater public interest to allow Business to continue pollution as Industry serves a larger public interest. "The stream," writes Stone, "is lost sight of in a quantitative compromise between two conflicting interests."

Similarly, we can anticipate cases and controversies where the needs of robot developers, manufacturers and users will be weighed against those who are against robots (either because they have been injured by a robot, because of their religious perspectives or because of their labor interests). Judges will have to weigh the issues and decide between parties. But, unless robots themselves have rights, they will not be a party to the decision. They will not have standing. They will not be legally real.

Emergence of Rights

Neal Milner has developed a useful theory on the emergence of rights from a synthesis of literature on children's rights, women's rights, rights of the physically and mentally handicapped, rights to health, legal mobilization and legal socialization.[9]

His first stage in this theory is *imagery.* Here imagery stressing rationality of the potential rights-holder is necessary. From this perspective, the robot must be defined as a rational actor, an actor with intent. This, however, is only true from the Western perspective. From the Eastern perspective, previously outlined, rationality does not define life.

The next stage of rights emergence requires a justifying *ideology.* Ideologies justifying changes in imagery develop. These, according to Milner, include ideologies by agents of social control and those on the part of potential rights-holders or their representatives. These ideologies would be developed by scientists, science fiction writers, philosophers and perhaps even futurists. They would have to argue that robots are a legitimate category of life.

Stage Three is one of *changing authority patterns.* Here authority patterns of the institutions governing the emerging rights-holders begin to change. Milner next sees the development of "*social networks* that reinforce the new ideology and that form ties among potential clients, attorneys and intermediaries. We would see the emergence of support groups for robots with leading scientists joining political organizations. The next stage involves *access to legal representation.* This is followed by *routinization,* wherein legal representation is made routinely available. Finally *government* uses its processes to represent the emerging rights-holders.

Of course, this is just a general model. The initial step will be the most difficult. Arguing that robots have rationality, especially from the Western perspective which reserves rationalities for self-directed, individual, autonomous adult persons, will be difficult. Given the dominance of the West, it may be that robots will not gain rights until they are seen in the above manner.

Economic Issues

However, eventually AI technology may reach a genesis stage which will bring robots to a new level of awareness that can be considered alive, wherein they will be perceived as rational actors. At this stage, we can expect robot creators, human companions and robots themselves to demand some form of recognized rights as well as responsibilities. What

types of rights will be demanded? Basic human rights of life, friendship and caring? The right to reproduce? The right to self-programming (self-expression)? The right to be wrong? The right to intermarry with humans? The right to an income? The right to time off from the job? The right to a trial by its peers (computers)? The right to be recognized as a victim of crime? The right to protection from unwarranted search and seizure of its memory bank? The right to protection from cruel and unusual punishments such as the termination of its power supply?

In a potential world without work, some form of redistribution of wealth will be necessary. In Sweden employers pay the same taxes for robots that they do for human employees. In Japan some companies pay union dues for robots. Supporters of robotic rights might say that computers are paying these taxes and dues from their labor and should derive rights for such labor.

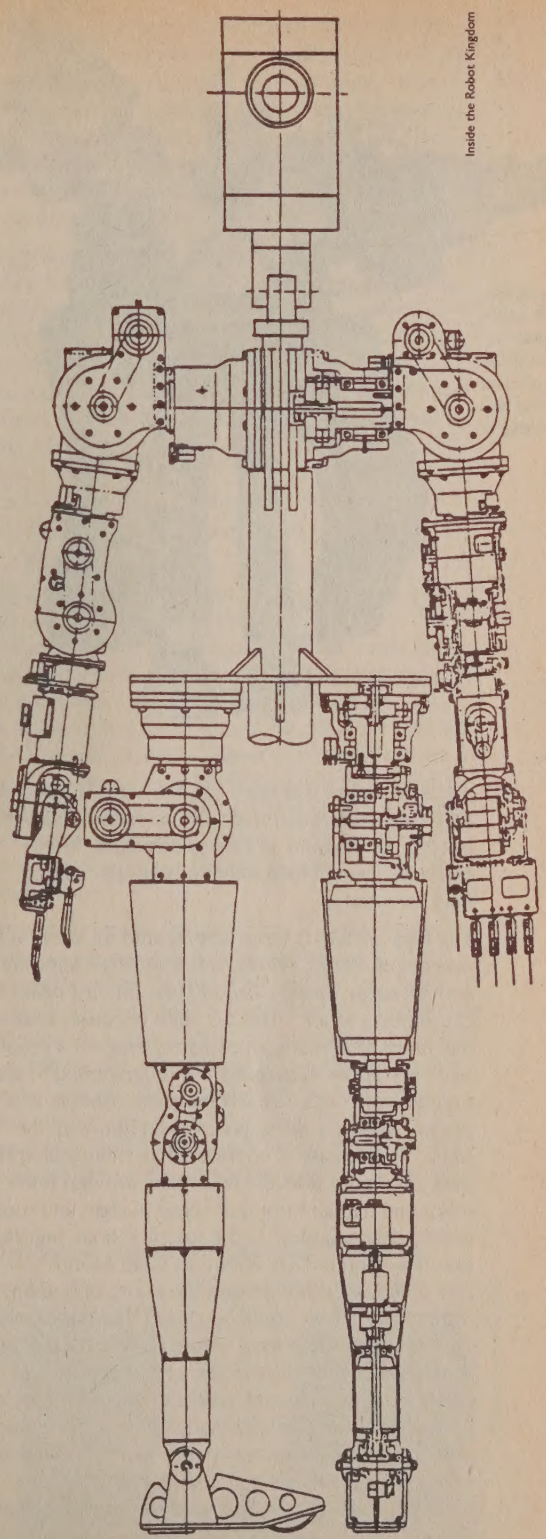
Following questions of distribution of wealth come questions of ownership. In the very near future it is expected that computers will begin to design their own software programs. Considering the fact that "the Copyright Act limits copyright protection to the author's lifetime, which is clearly inappropriate for a computer, it would then seem that a change in the law may be needed to provide proper *protection for programs with non-human authors.*"[10]

Legal rights and responsibilities will then be needed to protect humans and robots alike. This need should give rise to a new legal specialty, like environmental law — robotic law. With this new specialty we may find lawyers defending the civil rights of self-aware robots, which could take the following form: "to protect the super-robot from total irreversible loss of power *(life);* to free the robot from slave labor *(liberty);* and allow it to choose how it spends its time *(the pursuit of happiness).*"[11]

New Cases

We will then see an avalanche of cases: we will have robots that have killed humans, robots that have been killed by humans, robots that have stolen state secrets, robots that have been stolen; robots that have taken hostages, robots that have been held hostage, robots that carry illegal drugs across borders, and robots themselves that illegally cross national borders. Cases will occur in general when robots damage something or a robot itself is damaged or terminated. In addition, robots will soon enter our homes as machines to save labor, and as machines to provide child care and protection. Eventually these entities will become companions to be loved, defended and protected.

Robots that are damaged or damage or break other human laws will raise various complex issues. Of course, at present, robot damage will be simply a tort case, just as if one's car was damaged. But an attorney will one day surely argue that the robot has



Inside the Robot Kingdom

An assembly diagram of Wabot, the organ-playing robot created by Ichiro Kato, Japan's most famous roboticist. Designed to accompany a human vocalist, it can vary its tempo and tuning to adjust to individual singers, even out-of-tune ones, for the most euphonious ensemble effect.

The Robot Book

This powered exoskeleton will mimic and amplify any movement of the operator's arms or legs, giving him superstrength.

priceless worth. It is not a car. It talks, it is loved and it "loves." The robot, then, like a human, has been injured. Its program and wires damaged. In this scenario, we will then need to have special tort laws for robots.

The legal system is today unprepared for the development of robotic crimes. Recently, the *Morbidity and Mortality Weekly Report* cited the first death caused by a robot. "This accident occurred when a machinist at a Michigan company entered a robot's work envelope. Apparently not programmed to take human frailty into account the robot used its arm to pin the man to a safety pole killing him with the force."[12] This case is considered an industrial accident and could possibly have been avoided if the robot had had an improved sense of sight and more careful programming. In the future, robotic legislation may require laws similar to Isaac Asimov's *First Law of Robotics* that prevent the injury of humans by robots. These laws could be coded into the robots' memory such that robots would have to terminate themselves if a conflict arose.[13] However, we can easily imagine scenarios where a robot will have to choose between one and many humans or situations wherein its own termination may cause injuries to humans. These issues and conflicts will task programmers, the legal system, and robots themselves.

Once the computers within robots begin to program themselves according to external stimuli, the robot may begin to commit crimes completely independent of earlier human programming. If a robot can commit a crime, then a number of problematical questions will arise. "Can a robot intend to commit a crime? How is a robot to be punished? Is it sufficient to reprogram it? To take it apart? To penalize its owner? Its designer? Its manufacturer? Its programmer?"[14]

Such questions also raise problems concerning criminal trials that involve robots. Many court procedures will need to be adapted to accommodate the needs of such cases. This situation will be exacerbated by the development of robots which serve as witnesses for robots or provide expert testimony. Certainly, "a trial by a jury of peers seems inappropriate and certainly the 6th and 14th amendments guarantees to such a trial do not apply to robots."[15]

The Electronic Judiciary

To understand the legal principles that can be applied to robots, we must first have an understanding of the emerging electronic Judiciary. Courts themselves in the next 50 years may be robot-computer run.

The first step will be judges using computers to aid in searching out the most appropriate precedent to fit the case. The development of a legal reasoning robot could serve as a valuable adjunct to a judge's ability to render fair decisions. "As computers grow more elaborate and versatile (they) can better cope with the complexities of law, judgments and precedence."[16] A legal reasoning robot could "serve as a repository of knowledge outlining the general parameters of the law . . . assisting in the reasoning process necessary to reach a conclusion."[17] As a logic-oriented companion and a massive knowledge bank with the ability to instantly recall legal facts, precedent and procedure, a legal robot would greatly assist the judicial system by speeding up court procedure, minimizing appeals based on court error, and preventing legal maneuvering, thereby resulting in fewer cases brought to court.

Eventually, as enough statistics are compiled, judges may not be that necessary except at the appellate level. Judges could then be free to vigorously pursue the legal and philosophical dimensions of societal problems.

Of course, fairness is not a given; it is a political issue. Law, unlike mathematics, is laden with assumptions and biases. Decision-making is an act of power. Initially the use of computers will shift power in the court system from judges to programmers. Judges, of course, if they allow AI to enter their courtrooms, will do their best to keep control of the law and programmers. However, given the anticipated development of robotics, eventually we may see computers changing the programming and developing novel solutions to cases.

Legal Principles

To understand in more concrete terms the legal future of robots, we must understand what legal principles will be applied to conflicts that involve robots. Lehman-Wilzig's article on the legal definition of artificial intelligence is extremely useful. He

presents various legal principles which may be of relevance to robot cases. They include: product liability, dangerous animals, slavery, diminished capacity, children, and agency.[18]

Product liability would be applied as long as robots are believed to be complex machines. Not only will the manufacturer be liable, say in the case when a robot guard shoots an intruder, but so will "importers, wholesalers, and retailers (and their individual employees if personally negligent); repairers, installers, inspectors, and certifiers."[19] Thus those that produce, regulate, transport, and use the robot will be liable to some degree. Certainly, as caseloads for robot liability cases mount, insurance companies will be cautious about insuring robots. Moreover, we can imagine the day when manufacturers will argue that the robot is alive and that the company is not liable. Although the company may have manufactured the robot, they will argue that since then the robot has either reprogrammed itself or the new owner has reprogrammed it.

Product liability will be especially problematic for AI because of the present distinction between hardware and software. For the robot that kills, is the manufacturer of the arms liable, or the software designer, the owner, or is there no liability — Human beware, computer around! Will we see no-fault computer insurance law?

The danger that robots may cause would logically increase as they become auto-locomotive, that is, once they can move. At this stage law relating to *dangerous animals* may be applicable to robots. Like animals, they move and like animals they give a sense of intelligence, although whether they actually are intelligent is a political-philosophical question. Lehman-Wilzeg writes:

"While the difference in tort responsibility between product liability and dangerous animals is relatively small, the transition does involve a quantum jump from a metaphysical standpoint. As long as AI robots are considered mere *machines* no controversial evaluative connotations are placed on their essence — they are inorganic matter pure and simple. However, applying the legal principle of dangerous animals (among others) opens a jurisprudential and definitional Pandora's Box, for *ipso facto* the "machine" will have been transformed into a legal entity with properties of consciousness, if not some semblance of free will. Once begun, the legal development towards the "higher" categories will be as inexorable as the physical expansion of robotic powers. In short, the move from the previous legal category to the present one is the most critical step; afterwards, further jurisprudential evolution becomes inevitable."[20]

Given the structure of dominance in the world today, between nations, peoples, races, and sexes, the most likely body of legal theory that will be applied to robots will be that which sees robots as slaves. They will be ours to use and abuse. Of course, as Stone has pointed out, this means that they will have no legal status. The slave and the robot cannot institute proceedings himself, for his own recovery, wherein damages are recovered for his pain and suffering. Will errant robots have to be responsible for their actions? Owners may argue that the slave understood the intent of his or her actions, and make the slave responsible.

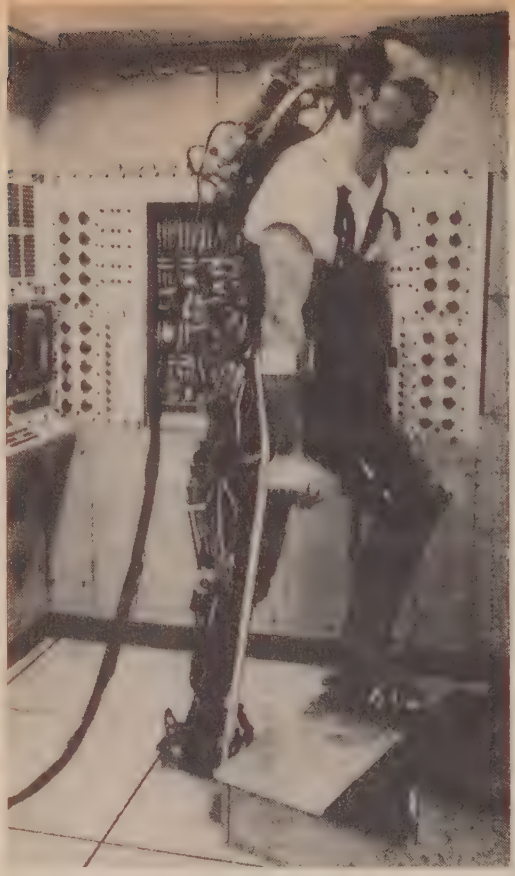
The problem of punishment is also problematic. Robots have neither money nor property. One way would be to give the robot to the injured party for his economic use. Another would be to eliminate the robot or to reprogram the robot. This may be analogous to the present debate on the right of the fetus: is it alive, do we have the right to terminate it? Also, who has the right to terminate a robot which has taken a human life, or a robot which is no longer economically useful? We would not be surprised if in the 21 century we have right-to-life groups for robots.

Lehman-Wilzeg argues that another category for robots would be that of *diminished capacity* — "used for those individually independent but have a diminished capacity for initiating actions or understanding the consequences of such actions at the time they are being committed." Of course, what is important here is intent. However, robots will not be the stupidest of species — more likely they will be the most intelligent — at question will be their morality, their ethical decision-making. More useful, yet also ultimately problematic is the law of *agency*. As Lehman-Wilzeg writes:

"To begin with, the common law in some respects relates to the agent as a mere instrument. It is immaterial whether the agent himself has any legal capacity, for since he is a sort of tool for his principal he could be a slave, infant, or even insane. . . . 'It is possible for one not *sui juris* to exercise an agency power.' Indeed, the terms *automaton* and *human machine* have been used in rulings to describe the agent. Nor must there be any formal acceptance of responsibility on the part of the agent. . . . The only

A 1979 forearm prosthesis, WH-11E2, could pinch and grip.

Mechanical Hands Illustrated



Walking shell for paraplegics, consisting of 60 pounds of motorized, battery-powered tubing and hydraulic joint actuators. The exoskeleton can walk with or without a human load, move forward, backward, turn and walk up stairs. Developed at the Department of Mechanical Engineering, University of Wisconsin, Madison, 1976.

element required for authority to do acts or conduct transactions . . . is the communication by one person or another that the other is to act on his account and subject to his orders. Acceptance by the other is unnecessary. Thus, . . . generally speaking, anyone can be an agent who is in fact capable of performing the actions involved. Here, then, is a legal category already tailor-made for such a historical novelty as the humanoid."

Although the legal categories presented — from product liability to agency — are useful heuristics, the fantastic notion of robotic rights behooves us to remember that development in robots may result in (or may need) entirely new legal principles and futures.

Another perspective and useful heuristic in understanding the rights of robots involves developing two continuums at right angles to each other. At one end of the x-axis would be life as presently defined: flesh and bones, reflective consciousness and soul. At the other end would be robots as defined in much the way that many see them today — mechanical-electronic gadgets that run programs designed by humans. Along this continuum we can imagine humans with a majority of robotic parts (artificial limbs, heart, eyes) and robots with human-like responses and reactions (creativity, ability to learn). We would also have robots that look like humans and humans that increasingly look like robots.

On the y-axis we can also develop a rights dimension. At one end of this continuum would be a condition of total "human rights" and at the other end, a state of rightlessness. Along this continuum, we can visualize robots representing themselves and robots represented by guardians. Finally we can develop a moving-stationary dimension as well as various economic dimensions (household robots to military robots). By juxtaposing these dimensions (flesh-mechanical; rights-rightless; moving-stationary) and visualizing them across time, we can develop various alternative scenarios of the future of robots.

We can imagine the day when a bold lawyer rewrites history and argues that a robot should be treated legally as a person. On that day an entirely new future will emerge. ■

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Inside the Robot Kingdom

The robots are coming, and they are Japanese. About 50 percent of the world's population of robots live on the island of Japan, and a large share of the rest living outside have been exported from there. Japan manufactures the mythic image of robot plural, of comprising a countless, advancing army; it is the source of nearly all the millions of robot toys and epic Saturday-morning robot cartoons. This book surveys life in robotto okuku, *the Japanese nickname for their own Robot Kingdom, and illuminates the way a culture aspires to, and eventually accommodates, the ways and metaphors of robots.*

—Kevin Kelly

Forty twists and turns transform a Mobile Suit MSZ006 Z Gundam doll into a fighter plane.

Inside the Robot Kingdom
(Japan, Mechatronics, and the Coming Robotopia)
Frederik L. Schodt
1988; 256 pp.
$19.95
($21.45 postpaid) from:
Harper & Row
2350 Virginia Avenue
Hagerstown, MD 21740
800/638-3030
or Whole Earth Access

Shobe-e Tamaya with a spring-driven *karakuri* doll made by his ancestors over 250 years ago and still used in religious festivals today.

These robots were precision-scale models of the seemingly endless varieties of robots in the ever-expanding Gundam animation universe, plus some extras, and by 1984 a total of one hundred million had been sold, nearly one for every man, woman and child in Japan. Most were assembled from kits, but some were also sold in completed form. One, the Deluxe Mobile Suit MSZ006 Z Gundam, retailed in 1986 for around thirty dollars and, as the box design shouts in English (for advertising effect), is a "perfect detailed super heavy version." It is also designed with the complexity of an origami masterpiece; to transform it into a fighter plane requires nearly forty different twists and turns. But if a boy cannot figure out the complex movements, all is not lost. Bandai was one of the first Japanese toy makers to guarantee its wares in 1958 and like most major toy companies today has a national network of walk-in service centers where specially trained staff answer questions and complaints from consumers — and demonstrate how to properly transform robots.

Complex Systems

A bona fide academic journal, this requires high mathematical understanding. However, occasional articles are comprehensible to plain-English layfolk, and merit attention. The complexity in question permeates key concepts such as distributed learning (honey bees cooperating in a hive), fault-tolerant networks (a street of downed powerlines that don't topple the electric grid), and local-rule politics (in cellular automata worlds local rules, rather than global order, determine the ecology).

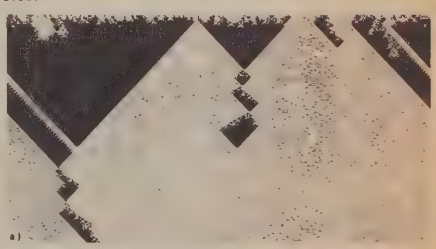
—Kevin Kelly
[Suggested by Steven Levy]

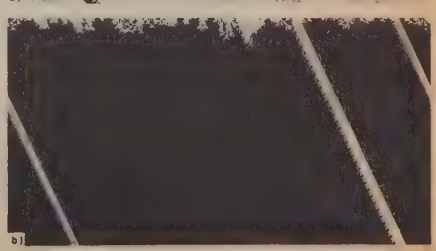
•

Parallel Networks that Learn to Pronounce English Text

Abstract: This paper describes NETtalk, a class of massively-parallel network systems that learn to convert English text to speech. The memory representations for pronunciations are learned by practice and are shared among many processing units. The performance of NETtalk has some similarities with observed human performance. *(i)* The learning follows a power law. *(ii)* The more words the network learns, the better it is at generalizing and correctly pronouncing new words. *(iii)* The performance of the network degrades very slowly as connections in the network are damaged: no single link or processing unit is essential. *(iv)* Relearning after damage is much faster than learning during the original training. *(v)* Distributed or spaced practice is more effective for long-term retention than massed practice.

Rules whose dominance is affected by the master rule. (A) and (B) represent different master rules.





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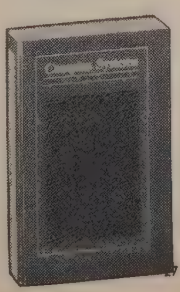
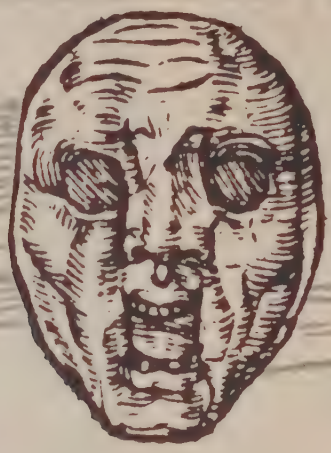


IF WE CAN KEEP A SEVERED HEAD ALIVE



BY CHET FLEMING

ATTEMPTS TO KEEP SEVERED HEADS ALIVE AREN'T NEW, AND THEY AREN'T PLEASANT. For example, there's a report of a French scientist in the 1800s trying to connect the severed heads of executed prisoners, fresh from the guillotine, to the bodies of dogs. From 1910 through 1964, at least a dozen research teams in Europe, America, Israel, and the Soviet Union tried various types of animal head grafts, head transplants, brain transplants, head perfusions, and brain perfusions. Very little came of them. For example, in a set of experiments done by a team of neurosurgeons in Wisconsin during the 1960s, some dog heads were severed from their bodies and placed on blood processing machinery. They continued to generate brain waves after the spinal cord was severed, but only for about four hours. During that time, the severed heads were under heavy sedation, and they never regained consciousness after the operation started. In addition, the brain waves steadily tapered off during those four hours, which effectively means that those operations didn't prolong life; they only prolonged the process of dying.

Then, in 1971, a team of neurosurgeons in Cleveland transplanted several monkey heads onto the bodies of other monkeys and then revived the transplanted heads to a state of full consciousness for up to 36 hours. People might argue over semantics and technicalities, but those severed heads were conscious and "alive" according to any reasonable definition.

Both of those surgical teams stopped working on intact heads (with eyes, mouths, etc.) less than a year after they started, and they turned to research on isolated brains with no sensory organs and no ability to communicate. That was an interesting decision, apparently based on several factors. On a purely technical level, it's cleaner and more precise to study what's going on in an isolated brain if the blood doesn't also circulate through other types of tissue. However, the scientific factors aren't the only reasons those teams decided to stop working on intact heads. One of the neurosurgeons told me he didn't feel ready to address the ethical issues of keeping severed animal heads alive for sustained periods. What would happen if he proved he could keep them alive for weeks or perhaps even months? What would he do if some of his patients, who were dying with no other hope, wanted the operation? He simply didn't want to confront those issues. Another neurosurgeon said it would be disturbing — the word he used was "creepy" — to have a severed animal head in the lab, able to look around and see what's going on, probably in a state of bewildered discomfort if not outright pain. However, he wasn't bothered by having isolated brains in his lab, since he thought the brains were in a deep-sleep state caused by sensory deprivation, rather than feeling pain.

Several research teams are still working on isolated brains, but to the best of my knowledge, no one is experimenting on intact severed heads. Or if they are, they're doing it secretly.

IN 1977, I STARTED WONDERING whether it's possible to keep a severed head alive. Although I

Personal regulation is the larger subject of this report. A guy sees some potential scariness coming down the road, and steps up to combat it by taking out an early, defensive patent on the process, nipping its momentum in the head, so to speak. If this doesn't halt it . . .
—Kevin Kelly

had an engineering sciences degree and had worked as an engineer for several years, my background had nothing to do with medicine and only a small connection to biochemistry. I hadn't studied the subject of severed heads, and I was completely unaware of the efforts mentioned above. The idea just popped into my mind, unexpected and uninvited, followed by a difficult set of questions.

These questions in particular kept coming back, no matter how hard I tried to shake them. *What would happen if a team of scientists cut the head off of a lab animal and kept it alive? How long would it live? Would it be in agony, or just numb?*

And if scientists can do that to animals, what about humans dying of terminal disease or mortal injuries? Would some people — not everybody, of course, but a few people who are dying with no other hope — want the operation? If so, what would it do to them, not just physically but mentally and emotionally? And what would it do to their families, to their wives, children, or parents?

And what about society? What will happen to the world over the next twenty, fifty, or one hundred years if scientists and doctors create a way to keep a severed head alive for months or even years?

I don't know the answers, but those questions won't go away. And they're not coming just at me. They're coming at everybody, like a high-speed train roaring through the night. Whether anyone wants it or not, this technology will soon be here.

Personal Biases: The Benefits and the Dangers

Along with this warning and plea, I must admit two personal beliefs which may amount to biases, so people won't accuse me of pretending to be detached and neutral when I'm really not.

First, on a purely scientific level, I think the research potential of "discorporation" is very large (incidentally, the word *discorporation* comes from *dis-* as in "disconnect" and *corpus*, the Latin root for "body"). By isolating and "perfusing" an organ, scientists can study it more carefully. They can control the input and precisely measure the output, without complications and interferences from other organs or the rest of the body. Perfusion as a method of studying organs is a well-established technique, and on a purely scientific level, it's quite useful.

Discorporation takes that technique and extends it to the entire head rather than an isolated organ. Severing a head and supporting it on blood-processing equipment would allow scientists to study the brain, the spinal cord, and possibly even the sensory organs in ways that are impossible today. Using discorporation, scientists could learn things that might help them discover better ways to prevent or treat alcoholism, drug addiction, mental illness, and hundreds of brain and nerve disorders. All of those research possibilities seem benevolent and humanitarian.

So on a purely scientific level, I support discorporation research. But that doesn't settle the issue; not at all. Nearly everything has some kind of benefit, and it's not enough to point out the benefits while ignoring the accompanying problems and dangers. The tough questions are: Do the advantages and benevolent potentials outweigh the problems and dangers? And is there some way we can have those advantages while minimizing the problems?

My second personal bias is this: I'm extremely worried about the potential for misuse of this operation. On one level are questions about the pain and suffering that will be inflicted on lab animals. Beyond those issues are questions about what will happen to human patients, their families, and all of society if discorporation is used to prolong human life. How would being severed from the body affect a person's mind and thoughts? If a severed head is in intense pain, could someone do something to let it die without committing murder?

And if people want it, who will get the operation? What would people like that do if they can be kept alive for years after they would normally die?

Some people respond to these questions by saying, "Don't cross that bridge until you get to it," or "Don't go looking for trouble." But I disagree.

Partly because of the "discorporation" idea and the nagging questions that came with it, I decided to go into patent law (I was studying law at the time) and specialize in biotechnology. For five years I worked with biochemistry and medical technology, reading and learning as much as I could about it, talking with scientists and doctors, and keeping notes.

Everything I learned suggested that it's possible to keep a head not just "alive" (generating brain waves), but completely conscious after it's been severed from its body.

No one can safely predict how long a severed head could live if a research team used the best equipment and techniques that are available now. However, science and probability point toward longer and longer survival periods. Every cause of death will appear as a specific problem, and scientists have proven many times that if they can clearly define a technical problem and break it down into detailed equations, molecules, and reactions, they can usually solve that problem. Even working with intact bodies that are totally overrun with terminal disease, doctors can often delay death for so long that eventually, they must make a deliberate decision to stop prolonging life. If they were working with a severed head attached to predictable, controllable mechanical parts instead of complex, diseased organs, they might be able to keep the head alive longer than they can keep an entire diseased body alive.

It's hard to really understand what it would mean to keep a severed head alive. A head with its eyes wide open, severed at the neck, mounted on top

of a cabinet covered with dials and gauges. Able to see and hear anything. Able to talk and control voice-actuated computers which, in turn, would allow it to control robotic arms, transportation devices, and any other machines that can be controlled by computer. The possibilities are so bizarre that they seem unreal, like a horror movie. It hasn't happened yet, but it's going to happen, soon.

How soon? I don't know. It might be several years. But then, it might not; researchers could be a lot closer than most people realize. A research team that specializes in experimental surgery could assemble the blood-processing system (all of the components are readily available) and try the operation on a lab animal in less than two weeks. If you don't believe that, try to figure out why it would take longer than two weeks to hook up some tubes to several pieces of equipment and then cut up an animal. That's how close we could be.

But what happens after that? What will happen in twenty or fifty years, if scientists learn how to keep severed heads alive for months or even years? Where will that technology lead us? If dying people want the operation, who will we keep alive? And what will they do with their extra time? In a hundred years, will this technology be regarded as a blessing or a curse?

Before any researchers start the next round of experiments on severed heads, they should do all they can to anticipate the long-term results of that research, and they should take every reasonable step to minimize any dangers unless and until someone can prove that the dangers won't come true. I don't know the answers, but I have no doubt whatsoever about what process will give us the best chance of success. We need to get the known facts and the unanswered questions out in the open where everyone can see them, and we need to invite everyone with something to contribute to join the debate.

That's the goal of this article.

Legal Issues: U.S. Patent 4,666,425 and Proposed Legislation

This plea is more than just a request; it's part of a legal notification and warning. On May 19, 1987, the U.S. Patent and Trademark Office issued patent #4,666,425, entitled "Device for Perfusing an Animal Head." I'm the sole inventor of that patent, and I formed a company (The Dis Corporation) and assigned the patent to it, because I want to share control over the patent with other people. If patent 4,666,425 withstands legal scrutiny, it will give The Dis Corporation the right to stop or slow down discorporation research in America unless any researchers agree to follow certain safeguards, which are summarized below.

A patent does not allow an inventor to practice his or her invention. Instead, it allows the inventor to *stop* other people from making, using, or selling the invention. So, I decided to get a patent on the machinery involved in the blood processing, in order to give me legal standing to stop or slow down this line of research.

It's sometimes possible to obtain a patent on a machine even though it hasn't been built, if all of the components are available and if the inventor can describe how to assemble them and use the machine. Since I haven't built or tested the blood-processing system, I applied for a patent with claims solely to machinery.

Not unexpectedly, the patent ran into trouble almost as soon as it was published. A high-level official at the Patent Office, taken by surprise when a reporter from *The New York Times* called and asked about the patent, called me and demanded to know what was happening. A week later, the Patent Office started a process called "re-examination" to re-evaluate the patent in light of "newly discovered prior art" even though the prior art it cited to justify the re-examination bore no more resemblance to my patent than that with which it had been compared during my initial application. To make matters even more complex, several additional items of genuinely relevant prior art (which I didn't know about before the patent was issued) came floating to the surface after things got stirred up.

It'll take several years for the legal questions surrounding the patent to be resolved if they have to go up through a process of appeals, but during the interim period, patent 4,666,425 remains an issued patent entitled to a "presumption of validity," and it can probably support a temporary injunction to stop people from infringing upon it until the re-examination is finished. In addition, I've filed another patent application with more technical detail, and I want to warn people openly and up front: neither the issued patent nor the pending application can be ignored. The Dis Corporation has legal standing to sue anyone who starts this type of research without permission, and the company is willing to do so if necessary to ensure that Congress and the public have a chance to consider the issues before the ball starts rolling.

I'm taking an aggressive stand with the patent because under the current laws, there is no requirement (other than the patent) which says that anyone has to approve this type of research before it can be done. Every federal law and regulation on the books today has loopholes that can be used to circumvent any requirement for researchers to explain and justify their decisions.

In an effort to provide some form of stop-gap control, I'm taking the following position. Any researcher who wants a license to use the patent will have to agree to obtain approvals from at least two scientific review panels at his or her own institution, made up of independent experts who don't have anything to gain personally from such research.

Three such panels already exist at every major

United States Patent [19]

Fleming

[11] **Patent Number: 4,666,425**

[45] **Date of Patent: May 19, 1987**

[54] **DEVICE FOR PERFUSING AN ANIMAL HEAD**

[75] Inventor: **Chet Fleming, St. Louis, Mo.**

[73] Assignee: **The Dis Corporation, St. Louis, Mo.**

[21] Appl. No.: **809,949**

[22] Filed: **Dec. 17, 1985**

[51] Int. Cl.⁴ **A61M 37/00**

[52] U.S. Cl. ..... **604/4; 128/1 R**

[58] Field of Search ..... **604/4, 5, 6; 128/1 R**

[56] **References Cited**

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The Tomorrow File, by Lawrence Sanders (1975), pp. 430–432 and 459–466.

Heads, by David Osborn (1985), pp. 108–110 and 146–147.

[57] **ABSTRACT**

This invention involves a device, referred to herein as a "cabinet," which provides physical and biochemical support for an animal's head which has been "discorporated" (i.e., severed from its body). This device can be used to supply a discorped head with oxygenated blood and nutrients, by means of tubes connected to arteries which pass through the neck. After circulating through the head, the deoxygenated blood returns to the cabinet by means of cannulae which are connected to veins that emerge from the neck. A series of processing components removes carbon dioxide and add oxygen to the blood. If desired, waste products and other metabolites may be removed from the blood, and nutrients, therapeutic or experimental drugs, anti-coagulants, and other substances may be added to the blood. The replenished blood is returned to the discorped head via cannulae attached to arteries. The cabinet provides physical support for the head, by means of a collar around the neck, pins attached to one or more vertebrae, or similar mechanical means.

20 Claims, 3 Drawing Figures

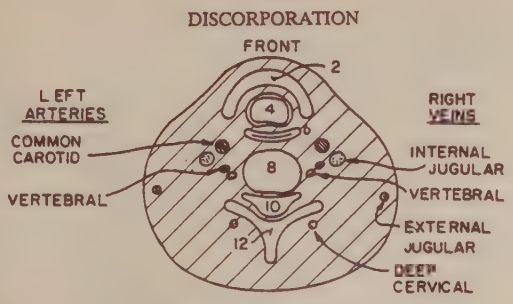

FIG. 1.

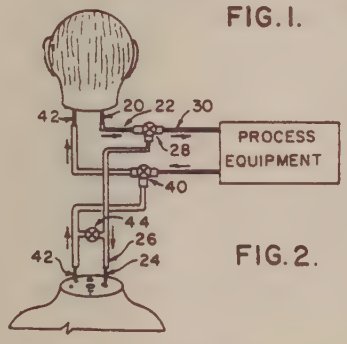

FIG. 2.

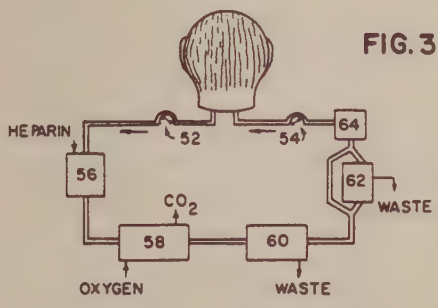

FIG. 3.

university or medical school: Institutional Biosafety Committees (IBCs), Institutional Review Boards (IRBs), and Animal Care Committees (ACCs).

Most researchers would probably consult with at least one of those review panels out of caution and good sense, even if no binding legal requirements applied. But dangers don't come from people who use caution and good sense. That's where the patent comes into play.

As a contractual condition for a license to use patent 4,666,425 (or any related patents which issue later), any researcher who wants to try the operation will have to agree to submit his or her research plans to all three of the review panels at his or her own institution (or at the nearest institution which has all three), and the researcher will have to obtain approval from at least two of those panels. This requirement does not control or predict any outcomes; it's only a method to force researchers who want to go forward with this line of research to explain and defend their proposals in fair debates.

But patent 4,666,425 is already in doubt and is being reexamined. And even if it's upheld, it will expire in seventeen years. There is no way patents can protect society against the long-term dangers of research into severed heads. Congress and the public will have to face up to some hard questions sooner or later, and we will be better off if we do it now, before the research actually gets started, rather than later. Therefore, I've asked several Senators and Representatives to introduce a bill in Congress saying that any researchers who want to do research into severed heads must first obtain approval from at least two of the three panels listed above. ►

Perfused Heads: Actual Attempts

Shortly after U.S. patent 4,666,425 was issued, I was given the name of a neurosurgeon who did some work involving isolated perfused dog heads in the 1960s. I contacted the neurosurgeon, and he gave me citations to several articles I didn't know about before the patent was issued. That "newly discovered prior art" raises some important questions about the validity of U.S. patent 4,666,425.

The most directly relevant item was published in 1964 in *Nature*, in a report entitled, "Extracorporeal Perfusion of the Isolated Head of a Dog".[1] This work involved dog heads which were completely severed and perfused by heparinized blood which was circulated through an oxygenator. Glucose was added to the blood, but apparently no waste removal system was used.

The neurosurgeons who did that work didn't intend to do it when they started their experiments. Rather than setting out to sever an intact head, they started out trying to isolate a brain with no sensory organs or other surrounding tissue. However, their first efforts were not successful, so they backed up a few steps and left the entire head intact. After they established that they could keep an intact head generating brain waves for several hours, they stopped working with intact heads and returned to their original goal of isolating the brain.

A more recent report (published in 1977) was entitled, "A Cat Head Model with Isolated Perfusion by the Animal's Own Blood."[2] However, this report did not involve a severed head; instead, the phrase "isolated perfusion" refers to the fact that the blood vessels which supply and drain the head were transferred to a mechanical pumping system, while the cat head remained attached to the rest of the body.

A number of reports of earlier experiments with severed heads are summarized in two publications cited in the footnotes [[3] and [4]].

Isolated Brains

The brain is the most difficult organ to sustain in an active state outside the body, for at least three reasons: it consumes a great deal of oxygen (about twenty percent of the oxygen consumed by an entire body is consumed by the brain), it is more sensitive to oxygen deprivation than any other organ, and it contains no reserve carbohydrates to supply energy to drive its chemical reactions.

For those reasons, it was not until 1963 that a team led by Dr. Robert White in Cleveland succeeded in isolating a primate brain which generated brain waves outside the skull.[5] In those experiments, the brains were removed from the skulls of monkeys and the major arteries and veins were connected to pumps and oxygenation chambers.

Dr. White's team subsequently developed a procedure for connecting an isolated brain to the blood vessels of a second animal.[6] The heart of the support animal served as the pump which circulated blood through the isolated brain, while the other internal organs of the support animal supplied nutrients and eliminated metabolic wastes from the blood. Using support animals, isolated brains were sustained for three days with very few signs of edema or decay. After three days, the experiments were terminated, since sustaining the support animal required too much time and effort.[7]

Dr. White's work as a practicing neurosurgeon involved matters such as tumors, aneurysms, and injuries to the brain. His research on animals also involved matters inside the brain, such as glucose and oxygen uptake and the effects of chilling the brain to reduce oxygen consumption (which is commonly done during major surgery). In an interview published in 1967, Dr. White was asked why he worked with isolated brains instead of intact heads. He answered by saying that transplanting an entire head would be "entirely possible, and infinitely easier than isolating the brain . . . [but] I want to study the brain itself. I want to know what happens in it . . . why it works as it works, what it does when it dies, why everything is as it is inside it. This is the main purpose of my experiment, and I am much less interested in transplanting a head."[8]

Transplanted Heads

Despite the comments above, made in 1967, Dr. White and his team ventured briefly into transplanting intact heads in 1970 and 1971. They reported three different sets of experiments.

In one set of experiments, cross-sections were removed from the necks of several monkeys, completely severing the spinal cord and all muscle tissue. The only tissue that connected the head to the body were four major blood vessels: the left and right internal carotid arteries, and the left and right internal jugular veins.[9]

In the second set, the head of a small monkey was severed from its body and grafted to the side of the neck of a large monkey.[9]

In the third set of experiments, the head of a monkey was severed and transplanted onto the decapitated body of a similar-sized monkey.[10]

In those experiments, the heads regained consciousness for up to 36 hours. They were alert and responsive; their eyes opened and followed objects moved in front of them, and their mouths bit at anything placed within reach. Those actions were more extensive and lasted longer than mere reflexes; the severed heads were conscious and "alive" as that word is used by most people. However, the transplanted heads had no control over the nerves or muscles of the recipient body.

Within a year, Dr. White and his team stopped doing any experiments involving intact heads. Based on a discussion I had with Dr. White, it appears

that he and his team decided not to place an intact head on a mechanical support system because of moral and ethical reasons. They had already proven that they could keep perfused brains alive for sustained periods, and they decided that too many unanswered moral and ethical questions would be raised if they did the same thing with an intact head. So, like a number of other research teams, they returned to their research on isolated brains with no sensory organs.

To the best of my knowledge, there has been only one other scientific report of a transplanted severed head since 1971. That report was published in Spanish in 1973; the title was translated as, "Study of the cerebral electric activity in a dog head transplant."[11]

Publicity: A Case History

In May 1987, about two weeks before my patent was issued and published, I contacted several reporters in confidence to let them know that U.S. patent 4,666,425 would issue on May 19th. I contacted them because I wanted to make sure they realized (1) I had never done the operation and was not promoting the idea, and (2) I wanted to give the public a chance to consider and debate this line of technology before it actually happened. I was worried that if reporters heard I had a patent on a machine to keep a severed head alive but didn't understand the facts behind it, things could get off to a very bad start.

So, to help make sure the first few stories were balanced and accurate, I called half a dozen reporters at publications with reputations for balanced reporting rather than sensationalism, such as *Science* and *Nature*, two highly respected technical journals. I also contacted an "Ethics" reporter for *Time* who had done a story about patenting animals, a *Newsweek* reporter with a biochemistry background, a medicine and biotechnology reporter for *The Wall Street Journal*, and a science/health reporter for *The Washington Post*. And, since I couldn't get through on the telephone to the science editor at *The New York Times*, I sent him a letter and left several messages asking him to call me or to have one of his reporters call me.

Every single reporter I reached on the phone was surprised and very interested. Several reacted with outright shock and amazement when I told them I was getting a patent on a machine to keep a severed head alive. They said things like, "That's impossible," and "I don't believe this."

However, after I sent them enough information to explain my position and convince them that I was trying to guide this project toward safe and socially responsible use, every single one of them lost interest except for Larry Thompson at *The Washington Post*. As of this writing, more than five months later, not a single one of the other reporters or their publications has done a story on discorporation or patent 4,666,425.

To me, that total lack of interest on the part of the other reporters seemed every bit as bizarre as my information must have seemed to them. For several weeks, I simply could not understand it.

But then one of them explained her position to me: "We're not interested in doing anything on this yet, but if any controversy arises, we'd be interested in reporting on that."

Any researchers who want to work on discorporation should keep that quote in mind. If you want to be left alone, then do things properly — openly, morally, and above-board — and ask for assistance and advice from other people. If you do that, most reporters will probably leave you alone. But if you want to get famous, then try to do this operation in secret. ■

This article was condensed from a self-published tome called *If We Can Keep A Severed Head Alive . . . ,* available from the author at Polinym Press, P. O. Box 22140, St. Louis, MO 63116.

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3. D. D. Gilboe, "Perfusion of the Isolated Brain," *Handbook of Neurochemistry* (Vol. 2, 2nd edition, Abel Lajtha, ed.): 301-330 (Plenum Press, 1983).

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6. White, 1981 (see note 5), 661-663.

7. Personal communication from Dr. White.

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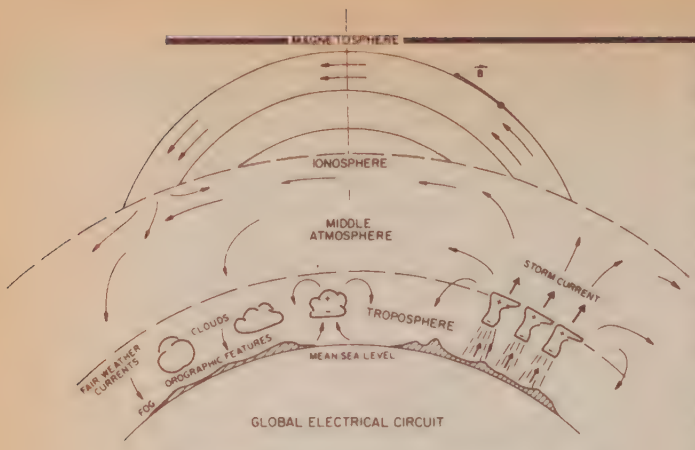
10. R. J. White et al., "Cephalic Exchange Transplantation in the Monkey," *Surgery 70:* 135-139, 1971.

11. B. E. Nava et al., "Study of the cerebral electrical activity in a dog head transplant," *Archiv. Neurobiol. (Madrid) 36 (6):* 471-478 (Nov.-Dec. 1973); also see "Head Implants in Dogs," Parts 1 and 2, in *Revista Clinica Espanola,* vols. 129 (5): 443-446 (June 15, 1973) and 130 (4): 301-306 (Aug. 31, 1973).



Schematic of various electrical processes in the global electrical circuit.

•

It has been known for over two centuries that the solid and liquid Earth and its atmosphere are almost permanently electrified. The surface has a net negative charge, and there is an equal and opposite positive charge distributed throughout the atmosphere above the surface. The fair-weather electric field is typically 100 to 300 V/m at the surface; there are diurnal, seasonal, and other time variations in this field that are caused by many factors.

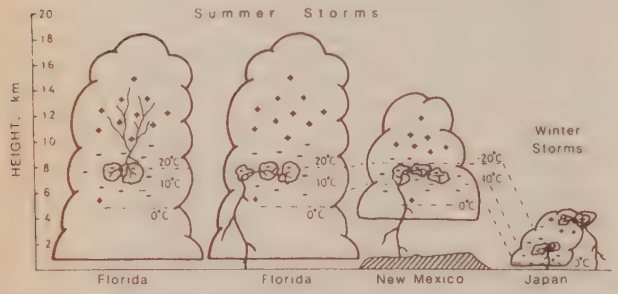


Illustration of how the negative-charge centers of cloud-to-ground lightning are at similar temperature levels in New Mexico and Florida storms, even though the latter have much greater extent of cloud and precipitation below the 0° C level and often above this level as well.

The Earth's Electrical Environment

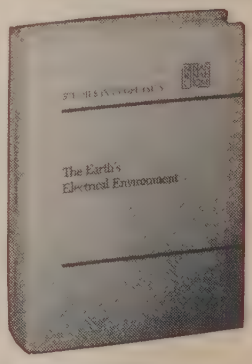
"We live in an environment that is permanently electrified," notes the introduction to this mosaic of scientific reports on what is known and not known about lightning, aurorae, the electrochemistry of the atmosphere, oceanic and ground currents, geomagnetic storms, the ionosphere, etc., how they interact with each other and with man-made systems.

The reference notes are a good guide to recent research. The "Overview and Recommendations" section pulls together the separately authored chapters, suggesting where more research is needed. The writing is expert but dull; mathematics is kept to a minimum, as is discussion of electromagnetism's biological effects. There are few photographs, and those only in black and white. No pandering to the public here. A livelier use of prose and graphics could have made it far more appealing, but this book provides an excellent summary of current knowledge.

—Robert Horvitz

The Earth's Electrical Environment
E. Philip Krider, Raymond G. Roble, Co-Chairmen
1986; 263 pp.

$28.95
postpaid from:
National Academy Press
2101 Constitution Ave. NW
Washington, DC 20418
202/334-3313

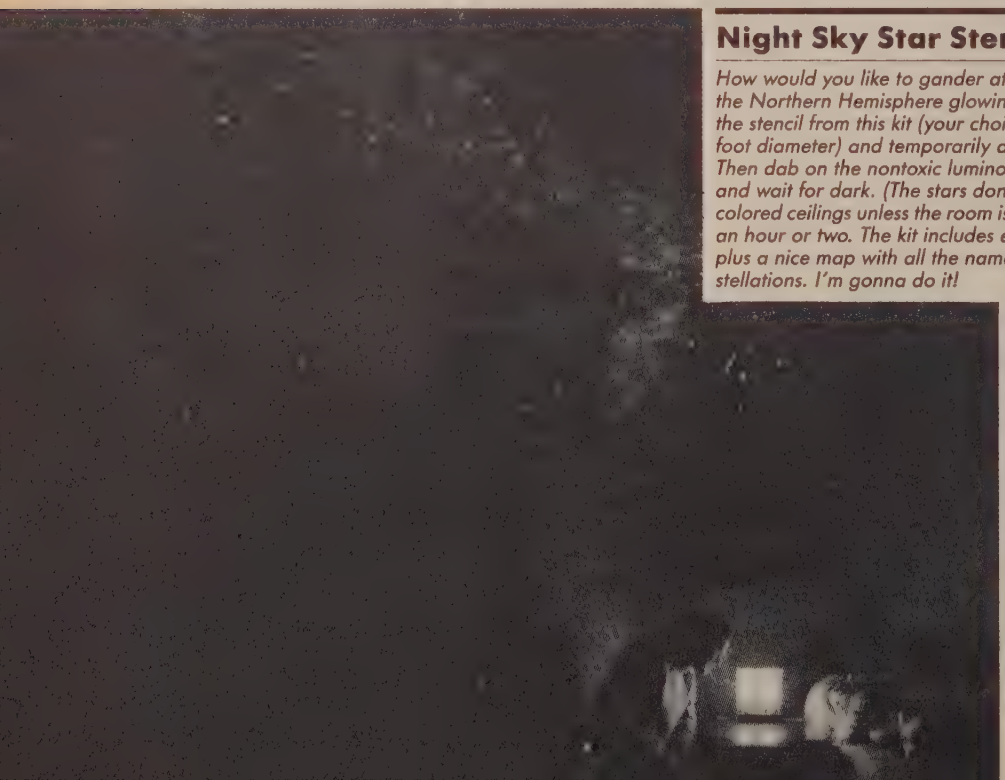


Night Sky Star Stencil

How would you like to gander at the stars and planets of the Northern Hemisphere glowing at you indoors? Take the stencil from this kit (your choice of eight- or twelve-foot diameter) and temporarily affix it to your ceiling. Then dab on the nontoxic luminous paint. Remove stencil and wait for dark. (The stars don't show on most light-colored ceilings unless the room is dark.) Installation takes an hour or two. The kit includes everything you'll need, plus a nice map with all the names of stars and constellations. I'm gonna do it!

—J. Baldwin

Night Sky Star Stencil
$30
postpaid from:
Ursa Major
695 Mistletoe Road #2
P. O. Box 3368
Ashland, OR 97520
503/482-1322
or Whole Earth Access

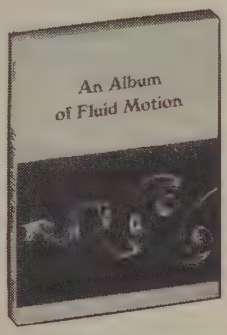


◄ Cozying up to a night-light under the stars on a bedroom ceiling.

An Album of Fluid Motion

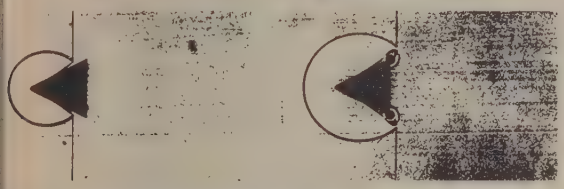
Spirals. Vortices. Waves. Cyclones. Turbulence. Ripples. An engineer collected all the classic photographs of hydraulic movement he could find in old scientific volumes and self-published a reference book for engineering students. He's been surprised that mostly artists have been buying it. I'm not surprised. —*Kevin Kelly*
[Suggested by Philip Morrison]

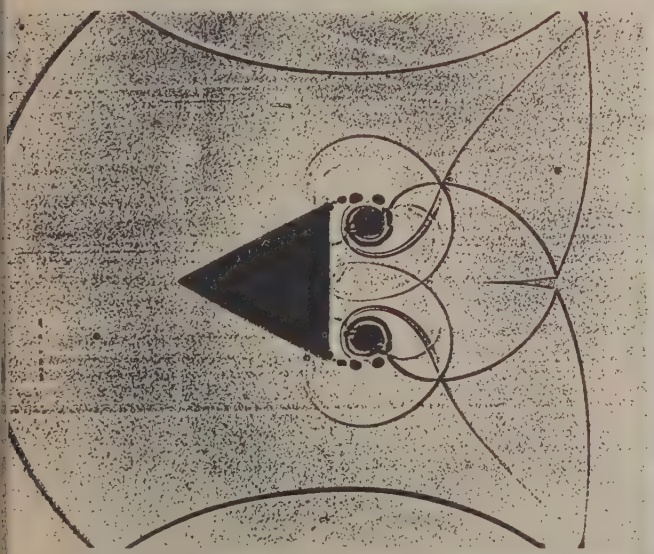
An Album of Fluid Motion
Milton Van Dyke
1982; 176 pp.
$10
postpaid from:
Parabolic Press
P. O. Box 3032
Stanford, CA 94305-0030



▲ A shadowgraph shows the mixing of two streams of the same density at a pressure of 8 atmospheres and a Reynolds number of 850,000. Two vortices have become a single larger vortex in this photograph.

▲ *Formation of a vortex ring from a nozzle.* Water is ejected from a sharp-edged circular nozzle of 5-cm diameter into a tank of water by a piston that moves at a constant speed of 4.6 cm/s after accelerating for 0.3 s. The rolling up of the vortex sheet that separates from the edge is shown by dye injected there. The piston stops at 1.6 s, and the vortex ring then induces a secondary vortex of opposite circulation.





◄ *Diffraction of a shock wave by a finite wedge.* As the shock wave passes the base, the flow separates and vortex sheets are generated. Further interaction produces an increasingly elaborate pattern of shock waves, slip lines, and vortices.

▲ *Spilling breaking waves.* This regular three-dimensional pattern, reminiscent of waves in the open sea, has evolved by nonlinear instability from a uniform train of steep two-dimensional Stokes waves. The waves are propagating from left to right with wavelength 0.75 m.

INTERACTIVE HISTORY

BY JIM PARROT

I WAS WARMLY SURPRISED to read your taped interview with Dave Shaw concerning Interactive Literature [*WER* #57, p. 128]. For the last eight years I have been in the process of discovering the same type of interactive situation, but from a slightly more rigid historical context.

Our groups re-create historical scenarios. A few large Bicentennial Revolutionary battles and earlier Civil War centenary reenactments have made the public aware that many of us get a kick out of this. The number of participants grows yearly and the most serious put themselves in historical scenarios without an audience other than their compatriot participants. We live out the experience.

It's historical fiction rather than science fiction, and it's normally played in the great outdoors or around a historical site. The National Muzzle Loading Rifle Association sanctions a number of Regional Rendezvous which are normally closed to the public (members, guests and families only) and attract thousands of participants. All living as though 1840 was still coming up. "Playing Fort" happens all over, wherever there are rebuilt forts and volunteers to play.

Within all this, there is the more serious participant who carefully packs his grub and "possibles," shoulders his flintlock, and treks off on his own or with a small group of friends. Local groups interchange at small-scale Rendezvous, and most of these have a number of competitions as part of the activities.

In addition to simply surviving the weather, a "trail walk" of hours in duration takes up a lot of the time. On a trail walk the participants, usually in teams, are given a scenario to live by and then move to a number of stations where they are presented with a vignette which they must solve, depending on their understanding of history and the goods and weapons carried with them. There are normally a number of shooting tests involving more than accuracy.

For instance, a clearing will hold a number of animal targets and the group must decide how, in what order, and with what weapons to engage the targets to bring home the most meat — the object of that station. Groups are scored according to their responses. Points are lost for having modern items (e.g. plastic containers). Some of these situations are very thought-provoking, and much research is expended by all participants as well as the planners to achieve the feeling of "being there."

Some historical reenactors are restricted to firing blanks, and some choose to stop at that. This must be like owning an old car and never driving it. The real lunatic fringe hunt in their full outfits (in the proper season, of course). The whole experience is transposed to 1750 (or 1780, or 1812). Many participants, depending on the

(Left) The 1987 NMLRA Western National Rendezvous was set high up in the Wyoming Rockies with well over 700 camps and plenty of people from all over the country. This horse-drawn wagon was used to carry out trash and bring in firewood and groceries. —*Muzzleloader*

weekend, the rules of the site, and their personal preferences, drift from one era to another, and from one set of experiences to another. Many fixate on one theme and develop a persona (trader, voyageur, soldier, ranger, mountain man) and all the personal gear and equipment necessary to that persona.

Because of the time and expense involved, it is not often that one changes character overnight (unless one has more than one complete outfit — some traders were soldiers before they got involved in the fur trade).

This sport attracts a wide range of people. I am a lawyer and I've met everybody from professors to bikers at Rendezvous, and everyone in between. The only common thread is an interest in history and a flamboyance of character that's hard to pin down. Some of the deepest and most sincere friendships I have ever shared have come out of my attendance at wilderness Rendezvous.

"Playing Fort" normally involves a more closely scripted scenario, but interpretation is left, to a fair degree, with the participant. Some of us volunteers travel ridiculous distances to take part, and the organizers normally don't want to turn us away as long as we behave reasonably correctly — in line with the historical event being reenacted.

To get back to the point, Interactive Literature is probably a lot of fun for those who are into it, but it ain't something new. We've been doing much the same thing, for the same reasons and to the same general ends, for quite some while now. What's more, there are a lot more people involved in the historical end of interaction games than the sci-fi end.

Perhaps the best solution for a large rendezvous such as this is to offer separate "best camp" awards: one for most attractive camp, and one for most primitive camp. —*Muzzleloader*

SOURCES

The concept of living history is well explained in *Time Machines, the World of Living History*, by Jay Anderson ($21.95 postpaid from The American Association for State and Local History, 172 2nd Avenue N/Suite 102, Nashville, TN 37201; 615/255-2971.

This is the definitive text on the subject, both as a concept and as a participatory hobby. Jay Anderson covers the broadest spectrum from the start of living history museums to the various groups and their eras — from Prince Valiant to WWII. He includes a thought-provoking examination of living a historical era or event as research, and his philosophy that we are escaping into the past to avoid the present may well be true, at least to a degree. His book enabled me to place my attraction to my hobby in a context of greater understanding. Knowing the history of the movement, if movement it be (it certainly is a growing thing — Anderson says that there are at least 100,000 of us deeply involved) and understanding the different directions it is taking has helped me fix myself in the

The contents of Tom Lawrence's haversack. From the top left to right: tin boiler; groundhog-skin pouch with sewing and fishing kits, cane needle case, awl and whetstone inside; tobacco box with char cloth; calf's knee; and flint striker. Under the calf's knee from left: a leather bag containing cedar bark tinder; a flax bag of parched corn; and a roll of extra ticking. In the middle is his rum flask and a turkey call made of cow horn and cane. Below the turkey call is some cooked venison and corn pone. At the far left and moving right is a ticking pouch of coffee; a horn cup; a tin containing a mixture of hog lard and beeswax; a pouch of tobacco with a pipe; and an 18th-century folding knife. ***—Muzzleloader***

time and space I want to "do" and am most comfortable in — the Western fur trade just before 1820. His book also contains a list of organizations, addresses, and sources. He has also published a *Living History Sourcebook* (*EWEC* p. 17). A number of universities offer credits in Living History. The book's jacket tells me that Jay is, or was, professor of the graduate program in folklore and historic preservation at Western Kentucky University.

The two major organizations of the "Buckskinner" are *Muzzleloader* ($12/year [6 issues] from Rebel Publishing Co., Rt. 5/Box 347-M, Texarkana, TX 75501; 214/832-4726) and *Muzzle Blasts*, the official membership magazine of the National Muzzleloading Rifle Association ($19.75/year [12 issues] from P. O. Box 67, Friendship, IN 47021; 812/667-5131). Of the two, *Muzzleloader* caters more to the Rendezvous participant than to the target shooter. *Muzzle Blasts* caters directly to both.

—Muzzleloader

With your subscription to *Muzzle Blasts*, you get entry to NMLRA events and other benefits. Contents include updates and reports of NMLRA activities, articles of historical interest, technical articles (normally on building and/or shooting muzzleloading firearms), reviews of books and "plunder" (new goods offered for sale by various suppliers), articles on black-powder hunting, and safety precautions. Also, there is a list of shoot dates, a report on Association affairs, an update of relevant legislation, and the NMLRA President's Message.

For anyone interested in shooting black-powder firearms, membership and *Muzzle Blasts* are a must. For those primarily interested in Rendezvous or reenactments they are helpful.

Each issue of *Muzzleloader* features articles on the black-powder shooting sport, including short stories (normally on a "Mountain Man" theme), how-to-do-it articles (make pemmican, make a powder horn, navigate by the stars), book reviews, gun reviews, gunsmithing, historical pieces (battles, personalities), reenacting (clothing, food events), buckskinning (equipment, experiences), and technical articles on shooting and hunting.

Mark Baker is a regular in *Muzzleloader*. His articles are the closest to "the real thing" for the feeling experienced by the many of us who attend Rendezvous. His attention to detail in his equipment is a goal to attain. In addition, he demonstrates the research and work necessary, I believe, to attain the maximum benefit from buckskinning (or whatever we call our sport). It is an eerie, almost a holy, experience to step into the past as completely as we can. I think it's that feeling that Shaw was telling you about in "Interactive Literature."

Rebel Publishing also has developed a series of large-format books full of informative how-to articles stressing historical accuracy. These are Volumes I through IV of *The Book of Buckskinning*. They are super guides not only to the manufacture of appropriate accoutrements, clothing, and equipment, but also to the development of primitive skills. They are priced at $9.95 (Vol. I), $10.95 (Vol. II), and $13.95 each (Vols. III and IV) postpaid. For a person like me, with little contact with the mainstream of the sport, they have been a godsend. ■

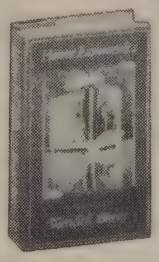
Home Economics

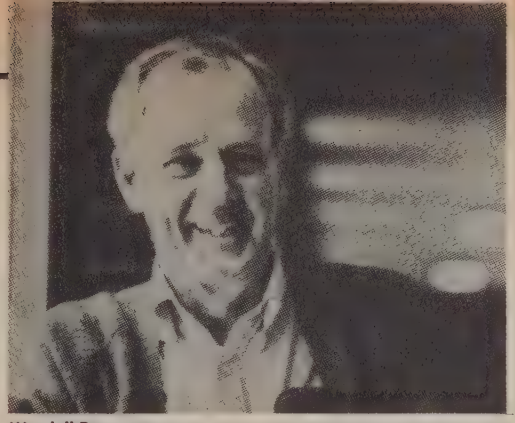
Conservative values, by which I also mean the values of conserving, are out of fashion these days. To invent, to buy new solutions, seems cheaper in the present, and so to conserve has gone the way of heroes and other old notions. We have consumed our store of ideas, even as we have consumed our resources. In the same way we have depleted wisdom and spent it on information.

Into the wilderness of 20th Century folly, Wendell Berry's voice cries sanity. He defends those elements of civilization that grow under conserving minds. These values diminish if not replenished, and he shows how each of them — topsoil, neighborhoods, manual work, marriage, small "inefficient" farms, rigorous education, and responsibility to place — conserves our humanity. He cultivates each with his inimitable clarity and logic, perhaps most expertly in this, his latest (1982-86) collection of essays. I unfashionably admit he is a hero of mine.

—Kevin Kelly

Home Economics
Wendell Berry
1987; 192 pp.
$9.95
($11.45 postpaid) from:
North Point Press
850 Talbot Avenue
Albany, CA 94706
415/527-6260
or Whole Earth Access





Wendell Berry

•

Humans, like all other creatures, must make a difference; otherwise, they cannot live. But unlike other creatures, humans must make a choice as to the kind and scale of the difference they make. If they choose to make too small a difference, they diminish their humanity. If they choose to make too great a difference, they diminish nature, and narrow their subsequent choices; ultimately, they diminish or destroy themselves.

•

We know that we cannot have a healthy agriculture apart from the teeming wilderness in the topsoil, in which worms, bacteria, and other wild creatures are carrying on the fundamental work of decomposition, humus making, water storage, and drainage. "In wildness is the preservation of the world," as Thoreau said, may be a spiritual truth, but it is also a practical fact.

On the other hand, we must not fail to consider the opposite proposition — that, so long at least as humans are in the world, in human culture is the preservation of wildness — which is equally, and more demandingly, true. If wildness is to survive, then *we* must preserve it.

•

Computer thought is exactly the sort that Yeats warned us against; it is made possible by the assumption that thought occurs "in the mind alone" and that the mind, therefore, is an excerptable and isolatable human function, which can be set aside from all else that is human, reduced to pure process, and so imitated by a machine.

•

If I had to choose, I would join the nature extremists against the technology extremists, but this choice seems poor, even assuming that it is possible. I would prefer to stay in the middle, not to avoid taking sides, but because I think the middle *is* a side, as well as the real location of the problem.

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Nature is not easy to live with. It is hard to have rain on your cut hay, or floodwater over your cropland, or coyotes in your sheep; it is hard when nature does not respect your intentions, and she never does exactly respect them. Moreover, such problems belong to all of us, to the human lot. Humans who do not experience them are exempt only because they are paying (or underpaying) other humans such as farmers to deal with nature on their behalf.

•

With industrialization has come a general depreciation of work. As the price of work has gone up, the value of it has gone down, until it is now so depressed that people simply do not want to do it anymore. We can say without exaggeration that the present national ambition of the United States is unemployment. People live for quitting time, for weekends, for vacations, and for retirement; moreover, this ambition seems to be classless, as true in the executive suites as on the assembly lines.

•

It is a fact, I believe, that many people have now lost their farms and are out of farming who would still be in place had they been willing for their neighbors to survive along with themselves. In light of this, we see that the machines, chemicals, and credit that farmers have been persuaded to use as "labor savers" have, in fact, performed as neighbor replacers. And whereas neighborhood tends to work as a service free to its members, the machines, chemicals, and credit have come at a cost set by people who were *not* neighbors.

•

One of the principles of an ecosystem is that diversity increases capacity. . . .

On a farm put together on a sound ecological pattern, the same principle holds. Henry Besuden, the great farmer and shepherd of Clark County, Kentucky, compares the small sheep flock to the two spoons of sugar that can be added to a brimming cup of coffee, which then becomes "more palatable but doesn't run over. You can stock your farm to the limit with other livestock and still add a small flock of sheep."

A small flock of ewes, fitted properly into a farm's pattern, virtually disappears into the farm and does it good, just as it virtually disappears into the time and energy economy of a farm family and does it good. And, properly fitted into the farm's pattern, the small flock virtually disappears from the debit side of the farm's accounts but shows up plainly on the credit side.

•

To facilitate both water retention and drainage in the same place, we must improve the soil, which is not a mechanical device but, among other things, a graveyard, a place of resurrection, and a community of living creatures. Devices may sometimes help, but only up to a point, for soil is improved by what humans do not do as well as by what they do. The proprieties of soil husbandry require acts that are much more complex than industrial acts, for these acts are conditioned by the ability *not* to act, by forbearance or self-restraint, sympathy or generosity. The industrial act is simply prescribed by thought, but the act of soil building is also *limited* by thought.

How to Make $100,000 Farming 25 Acres

In these times of agricultural devaluation and extreme hardship on so many American farms, the title of this book begs an explanation. No, it's not about growing marijuana, or any single crop. It is about a very specific marketing strategy for farm produce: a pick-your-own operation located on a paved road within 40 miles of a population center of at least 50,000 people.

This plan for agricultural prosperity belongs to a 72-year-old former U.S. Department of Agriculture worker who was born in Alabama the same year his namesake, Booker T. Washington, died. It is presented here by ***The New Farm*** *magazine, a spin-off from the Rodale Press covering regenerative, or sustainable, agriculture. With numerous reprints of articles from the magazine, the result is an eclectic farm tour with the emphasis on marketing.*

The old saw that "the farmer is the only one who buys retail, sells wholesale, and pays the freight both ways" gets a dose of alternatives in this book. One is to add value to your crop — sell cider not apples, and cheese, not milk. Another is to bypass the middlemen; with a pick-your-own system, the farmer is able to sell at retail. New crops like kiwis and shiitake mushrooms, and new strategies like farm-restaurant combinations, are all explored. When the going gets tough, the tough find new niches. *—Richard Nilsen*

Peter Duenkelsbuehler grossed $18,000 from fallow deer he butchered in his own slaughterhouse, and $90,000 from live animals sold to farmers looking to cash in on this new market.

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You have to have a computer. Every time your clients come to your farm, you want to record when they come and how much of each thing they buy. You want to know the per-capita consumption of your client households on each item you sell. I don't think farmers in this country keep records, because if they did, some of them wouldn't be doing some of the things they do.

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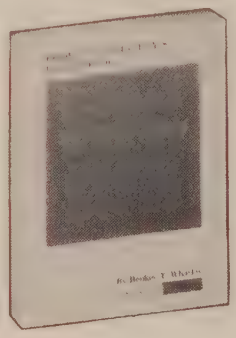
Judging from the demand for the Kaufmans' buffalo steaks, public acceptance is already high. Orders from individuals and bulk buyers are coming in faster than they can be filled. "We're about two buffaloes behind," Carolyn quips. "We really haven't had to find the customers. They find us."

•

Seiple's early-season strawberries ripen just as most of the farm's field crops are seeded. "It's a nice time for cash flow," he says. "With everything in, it's good to get some money in. Our goal is to work up to 12 acres of them."

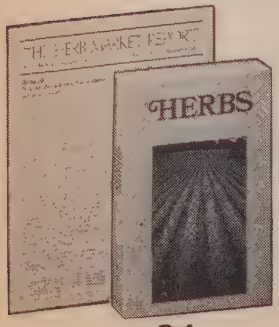
He's also added three types of peas, which ripen at the same time as strawberries, a feature he takes time to point out to berry-pickers. Seiple uses the same "while-you're-here" strategy a few weeks later, when string beans are ready. "Hey, raspberries are ripe now, too," he'll shout.



How to Make $100,000 Farming 25 Acres
Booker T. Whatley and the Editors of *The New Farm*
1987; 180 pp.
$17.95
($20.95 postpaid) from:
Rodale Press
33 East Minor
Emmaus, PA 18098
215/967-5171
or Whole Earth Access

The Potential of Herbs as a Cash Crop • The Herb Market Report

The author of this book and this newsletter got into agriculture through the wholesale herb business. He brings with him two things that innovative farmers can use — business savvy and a detailed knowledge of a whole area of specialty crops, many of which are now imported. He is big on presenting worksheets to estimate costs before launching into production, something too few farmers do. His real strength is marketing. The book has suggestions on everything from cottage industries and roadside stands to large operations that cut herbs with a swather, bale them like hay and sell by the ton. ***The Herb Market Report*** *analyzes the market potential of one or two new crops each issue, and keeps tabs on marketing innovations.* *—Richard Nilsen*



The Potential of Herbs as a Cash Crop
Richard Alan Miller
1985; 230 pp.
$13.20
postpaid

The Herb Market Report
$12/year
(12 issues)

Both from:
OAK, Inc.
525 S.E. H Street
Grants Pass,
OR 97526
503/476-5588

•

Areas with limited water and poorer soils can produce as much income per acre with herbs as the most fertile areas with abundant water producing traditional farm crops. In addition, the investment requirements are lower when growing herbs. The primary investment is labor.
—The Potential of Herbs

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The specialty manufacturer is yet another excellent outlet for direct marketing, particularly for such local and small manufacturers of such items as mustard, salad dressings, sauces, relishes, pickles, spices and herb packers. . . . As you become "tuned" to the real uses of these crops, you will be first overwhelmed with the fact that most of these businesses currently buy most of their products from import houses. Then you begin to see the possibilities.

When the grower sells directly to the manufacturer, the price received is still lower than retail. The depth of use in local markets can, however, more than make up for this disadvantage. There's room for hundreds of new markets. For example, consider the Italian food markets and the need for a fresh year round supply of basil, for the pasta industries. Why couldn't a small farmer, growing this crop as an annual, mix his basil with a good quality olive oil and several other important ingredients, and market it as "frozen *pesto*" in the one pound cardboard ice cream containers? *—The Potential of Herbs*

Tree Climber

"A Journal for Recreational Tree Climbing." Tree climbing as an expeditionary sport, with classification of climbs, routes, and climbing heroes! —John Benecki

•

Because trees are living beings that feel and hurt, it is important that non-injurious climbing standards be established to protect the trees and climbers involved in the activity. . . .

Another activity, a "tree restoration," is voluntarily performed on champion trees (the largest trees of their kind either on state or national levels) or noteworthy specimen trees. Professional tree care workers and interested individuals, preferably from the locality, work side by side to create a picture perfect tree. Dead wood, suckers, and weak branches are removed. Steel cables are installed, if needed, to give oversized branches support. Lastly, soil samples are sent to be analyzed to determine if fertilization is needed. The news media is contacted to cover the event and the public is invited to view the action.

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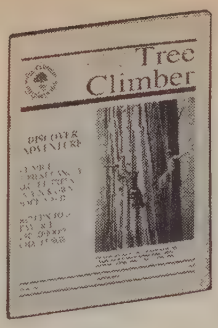
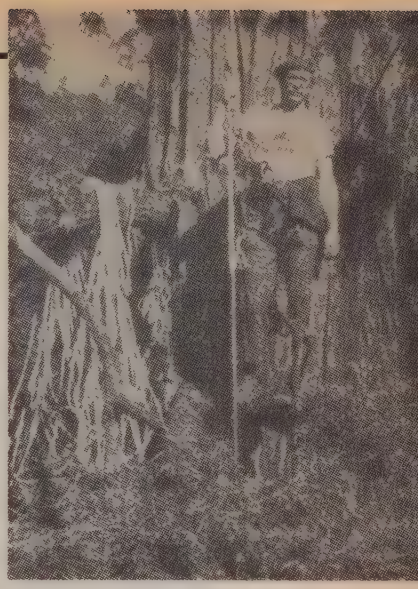
The tree top provides an escape from the world below. It's funny how a person's perspective changes viewed from the canopy of a tree. There's a feeling of being removed and isolated from life on the ground. It's like quietly peering through a window at life below. People might walk or drive by but without giving a thought to looking up. The climber is invisible to the world far below and this furnishes a refreshing time for reflection. It's a unique sensation.

•

How It's Done — To scale a tree, you first loop a rope over a branch. A special knot is tied, and the rope is then connected to the climber's harness (a tree surgeon's saddle). To climb, you pull down on one side of the rope and slide the knot up. This special knot, a taut-line hitch (known and used by tree surgeons), automatically locks down on the rope when you let go of the knot. You repeat this procedure, gaining a foot at a time, until you're up.



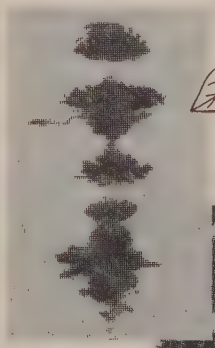
Tree Climber
Peter Jenkins, Publisher
$15/year
(4 issues) from:
Tree Climbers International
P. O. Box 5588
Atlanta, GA 30307



250 feet up in coastal redwood. Gerald Beranek, the photographer, walked out 15 feet on a horizontal branch to take this picture of Peter Jenkins.

Natural History of Vacant Lots

Back in 1982, I reviewed a book called ***Wild Plants in the City*** *(CQ #32). What that book did for the flora of Boston, this one does for the flora and fauna of California — it gives eyes to see and understand plants and critters that are usually overlooked. The term "vacant lot," though easily understood, is a name derived from the real estate business and to a naturalist it's a misnomer. Welcome to the world of disturbed natural areas, which is how naturalists describe the towns and cities where most of us live. This book is designed for the interested layman, and includes a chapter of suggested activities that makes it easy to use with children. If there are books like these for your area, let us know about them.*
—Richard Nilsen



Cheeseweed *(Malva parviflora)*, Prostrate Pigweed *(Amaranthus blitoides)*, Flax-leaved Fleabane, and grasses growing in sidewalk crack.

Prostrate Pigweed

Cheeseweed

Mourning dove

Flax-leaved Fleabane

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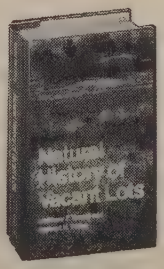
Mourning Dove *(Zenaida macroura)* Smaller than a pigeon, gray brownish, with pointed tail edged in white.

Distribution: On transmission wires, television antennae on rooftops, fences, and trees around ranches and homes, especially at edges of cities and towns often found feeding in vacant lots.

Comments: The bird feeds on a variety of weed seeds, including the seeds and fruits from mulleins, fiddleneck, California Poppy, star thistles, Red Maids, mustards, pigweeds, and chickweeds, as well as wheat and corn when available. Commonest dove found throughout the West.



Natural History of Vacant Lots
Matthew F. Vessel
and Herbert H. Wong
1987; 284 pp.
$22.50
($24 postpaid) from:
University of
California Press
2120 Berkeley Way
Berkeley, CA 94720
800/822-6657

or Whole Earth Access

Organic Agriculture Moves Into the Mainstream

text and photos by Richard Nilsen

Carmel Valley farmer Russell Wolter explains the labeling on his custom produce box to organic growers and marketers attending the Eighth Ecological Farming Conference in California. His 40 acres have been farmed organically by his family for 41 years. Bounded on one side by a golf course and on another by a new upscale subdivision, Wolter makes no bones about his love of farming: "If I had the value of this land in the bank at 5 percent interest, I'd make more money in one year than I have in 32 years of farming."

THE EIGHTH Ecological Farming Conference was held in February at Asilomar, near Monterey, California. Sponsored by the Steering Committee for Sustainable Agriculture, this is the annual three-day get-together for organic growers, distributors and retailers from California and beyond.

At a time when conventional chemical agriculture remains in an economic bind, organic farming continues to increase its share of the market and pay producers prices above what they can make farming with chemicals. It's a situation bound to attract the attention of mainstream farmers, and more of them are converting at least a part of their production to organic each year. "The organic farming movement has become the organic farming industry," said Robert Scowcroft, Executive Director of the California Certified Organic Farmers.

Nearly 700 people showed up for this year's conference, which began with a tour of a nearby organic farm in the Carmel Valley. Russell and Karen Wolter raise lettuce and other vegetables on 40 acres that have been farmed organically by the family for 41 years. The Wolters' wholesale broker, who is also a grower, has been so impressed by their success that he has set aside 40 of his 200 acres of production to convert to organic. Under California's Organic Food Act, which gives a legal definition to the term "organic" when used to sell food, a farmer can't use chemicals in the fall and decide to switch to organic the following spring. The land must first be free of chemicals, which can take one year or longer. This is referred to as "transitioning."

For some crops, the demand for organic product now exceeds supply. Economics may be a stronger motivator than ideology, but the result to the consumer is an increase in the pesticide- and chemical-free food available.

The Raley's supermarket chain, with 53 stores in northern California and Nevada, has begun its own program of testing produce for pesticide residues and is now selling pesticide-free produce alongside the chemically grown product. Raley's President Charles Collings, a conference panelist, explained the switch purely in terms of customer demand: "When our customers are concerned, we're concerned. When I found out that this program put me on the same side as Cesar Chavez and Ralph Nader, I had to go home and seriously evaluate my position. But in my 31 years with Raley's, no innovation has ever received as much positive response from customers as this has."

For information about next year's conference and other programs for the general public, contact the Steering Committee for Sustainable Agriculture, P. O. Box 1394, Davis, CA 95617. For information on organic farm certification, contact the California Certified Organic Farmers, P. O. Box 8136, Santa Cruz, CA 95061. ■

Grand old bug man E. J. "Deke" Dietrick sucking up insects on the Wolter farm. Dietrick owns Rincon-Vitova Insectaries (Box 95, Oak View, CA 93022), sells mail-order beneficial insects and this gadget, called a D-Vac. It's basically a garden blower running backwards, and is far superior to a sweep net for field sampling because it will actually suck insects like aphids right off the plants. Inside, a fine mesh net captures the critters for identification.

Reforming the Forest Service

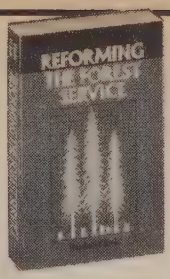
Randal O'Toole runs the Cascade Holistic Economic Consultants in Eugene, Oregon, and as a forest economist has become the hired gun of choice for conservation groups doing battle with the United States Forest Service. He has reviewed over forty different national forest plans and thousands of timber sales, and has noticed a disturbing pattern of uneconomic Forest Service logging plans and unhappy local citizens. This book is O'Toole's alternative, and at the least it is going to frame the debate over future forest policy decisions, and at best it will provide the blueprint for the most sweeping changes in the Forest Service since it was founded early this century.

First that word battle. Why are private citizens all over America fighting with part of their own government? For the simple reason that the Forest Service looks and acts like a demented, marauding bureaucracy, repeatedly doing things that make neither economic nor environmental sense. Most typically this involves selling timber and grazing rights at a loss to loggers and cattlemen, all the while building more and more new roads for them into the forests. Since these actions tend to be irrevocable, at least in terms of human life and memory, the result is a never-ending series of Save the This! and Save the That! last stands by conservationists.

O'Toole's insight is to see this flurry of excitement as a symptom, and to search for and find a deeper cause. This has to do with how the Forest Service gets and increases its budget, and the key word is incentives. *Yes, says O'Toole, the Forest Service "bears an uncanny resemblance" to the Soviet economic system: production quotas are set at the top, without regard to market prices or consumer demand, and allocated to the different forests, where the local managers are given incentives (increase of their budgets) to meet those quotas. This is because a chunk of the money derived from timber sales stays at the local forest level. With recreational activities, the structure is just the reverse and almost none of the revenues stay at the local level, so there is no incentive to develop more recreational facilities, even though the demand for them is great. The Forest Service's top-heavy Washington, DC, bureaucracy is also responding to an incentive resulting from the structure of how the money does (or doesn't) flow — money is appropriated by Congress and the first order of business for any bureaucracy is devising rationales to increase its share. Economic and environmental rationality have little to do with it.*

This analysis provides a neat sidestep to all the us/them polarizations. The Forest Service is not composed of evil men and women, says O'Toole, simply bureaucrats behaving rationally. The secret to change lies in changing the incentives, and for O'Toole the operative word here is marketization.

At its briefest, marketization has four parts. First, "Fund all activities out of net user fees." This is the for-profit system as opposed to subsidies from Congress. If paychecks depend on turning a net profit, below-cost timber and grazing sales will quickly end. Second, "Reduce appropriations to zero." Cutting off the Congressional dole also eliminates the need for most of the Forest Service's Washington, DC, staff, saving a big chunk of change. Third, "Charge fair market value for all resources." This includes recreation. Mr. and Ms. Camper-Hunter-Boater-Birdwatcher will pay to use the forests, but they will have more and better facilities, and more places to use both now and in the future because uneconomical forest logging and grazing have been eliminated from vast areas where they now occur. Fourth, "Decentralize the National Forest System." The Federal government maintains ownership but each national forest is chartered as an independent, publicly owned organization, and each forest supervisor is like a CEO, responsible to a Board of Directors.



Reforming the Forest Service
Randal O'Toole
1988; 247 pp.
$16.95
($19.70 postpaid) from:
Island Press
P. O. Box 7
Covelo, CA 95428
800/628-2828, x 416

And for those few things that a market system won't fix (e.g. what is the market value of endangered species?) O'Toole advocates keeping the Endangered Species Act, the Wilderness Act, the Clean Air Act and the Clean Water Act.

Will these sweeping changes work? Will they do a better job of allocating resources, satisfying competing users and conserving the resource than the present system? Will we be given a chance to find out?

I'm reminded of an historical analogy. It's the turn of the century, and Major John Wesley Powell, surveyor of the Colorado River, heads the newly formed U.S. Geological Survey. He is one of a handful of people in Washington, DC, who understands that the west is arid and that water allocation and development is the key to its future. Alone among them, he wants that future to be orderly, and understands that water use will make economic sense only if it first makes environmental sense. So his Geological Survey begins an inventory of Federal western lands so that wise land-use decisions will result. But the real estate and Chamber of Commerce crowd grows impatient, and they bulldoze him. In the west, we live with the results of that failure today.

The big difference that O'Toole would see between Powell's dilemma and our own today is that Powell's solutions were prescriptive (farm here, graze over there, leave that part alone) and from the top down. O'Toole argues that prescriptive solutions are always subject to poor implementation or subversion, and cites endless cases of their failure in today's Forest Service. His hope is that a totally decentralized market system will succeed where prescriptive solutions have failed. It is both a very conservative and a very radical idea. —*Richard Nilsen*

•

A Forest Service official told me one day that he had seventeen people working on his staff. "I sat down once and figured out that, if I had to, I could get along with only nine," he revealed. "Eight of them are just pushing paper around.

"But," he went on, "I realized that a government employee who has a staff of only nine doesn't get paid as much as one who has a staff of seventeen. So I decided not to do anything about it."

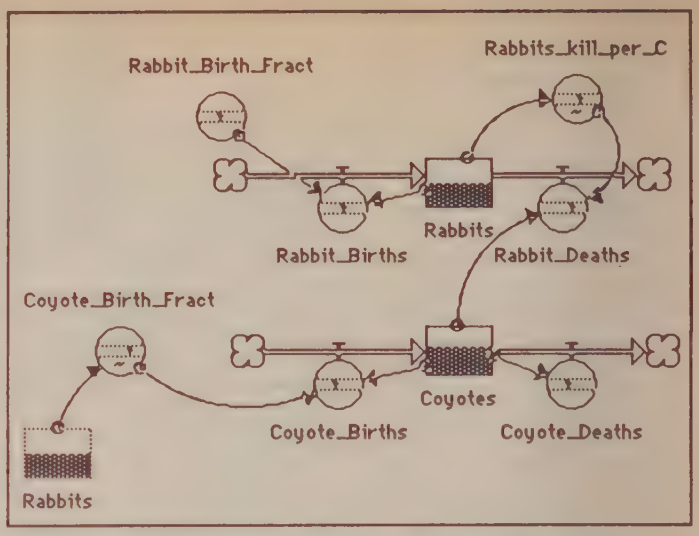
•

Eighty years of bureaucratic inertia render the Forest Service incapable of making the changes needed to correct the environmental and economic problems of the national forests. Reform must come from outside the agency, and it must dramatically change the institutions and bureaucracy under which the national forests are managed.

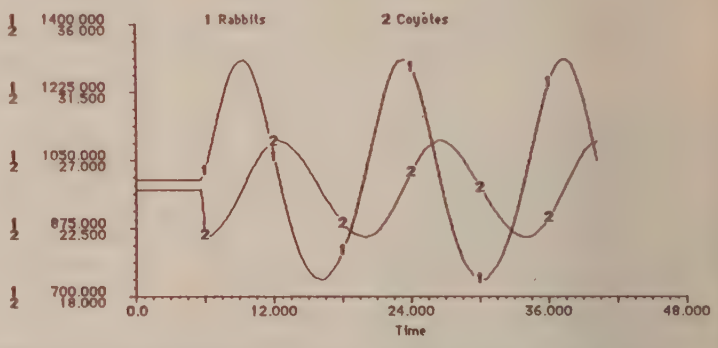
If, as this book suggests, the Forest Service is motivated primarily by its budget, then reforms must be aimed directly at the budget. New incentives can be created to encourage recreation where recreation is most valuable and to encourage efficient timber management on the most productive timberlands by making the agency's budget sensitive to the demand for these resources.

SOFTWARE TO RUN A COUNTRY WITH

BY W. BRIAN KREUTZER



A large number of models come free with STELLA. "Rabbits & Coyotes" is one of them. You start modeling by creating a structure chart which represents the relationships of the components of the system. This screen is what the structure chart looks like during an actual run of the program. The darker areas are the levels of population, and will change during the simulation.



This is one of the output options STELLA allows. It lets you view the results in this graph mode or watch the levels and rate indicators change on the structure diagram.

FOR ANYONE responsible for the management of a resource, organization, or nation, the microcomputer has become an invaluable tool. It can be used to help manage everything from personal finances to national economies. One of the ways it does this is through its ability to run models. Just like a child's model airplane, these models look or behave like the "real world" systems they represent. They are a collection of mathematical equations which represent the relationships that govern the behavior of a system. Managers can use these models to see the future consequences of their present actions. They can do this by changing the inputs to the models to reflect their policy decisions and then seeing how these changes affect the overall behavior and ultimate outcome of the system under study. This can be extremely helpful to a manager when "real world" testing of various decision alternatives are impossible due to time, expense, risk or ethical considerations.

Models can be used by everyone. To use them effectively you do not need to have degrees in computer science or system dynamics, but only an understanding of the problems you are trying to solve and knowledge in the area you are trying to manage. Computer models are tools. In the same way you can use a hammer without being a professional carpenter, you can use computer models without being a model builder.

One word of caution: a model is only as good as the modeler's understanding of the system and the modeling language. If this understanding is bad, the model is bad. But even if this understanding is good, it is important to remember that it is, after all, just a model. It is just one of many tools that should be used in the decision-making process. We would not buy tickets on a model airplane's flight to Bermuda. We should use the same good judgement in the use of computer models. They are simply representations of systems and each has certain limitations. These limitations should be found by the user before the models are used. Spider webs are extremely effective for catching flies, but you would not be able to build a bridge out of them.

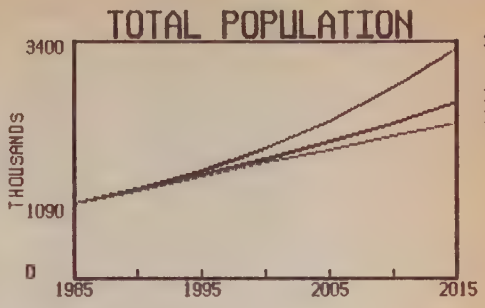
STELLA (Structural Thinking, Experiential Learning Laboratory) enables the user to easily create models of systems. It is powerful enough to be of use to professional model builders but it is so easy to use that people without previous modeling experience will very quickly be able to create models too. I am not a professional model builder but by using STELLA I was able to create a model which

shows how different harvest rates affect the long-term population of various species of whales. STELLA runs on the Macintosh line of computers and uses their famous graphic capabilities extremely well. One example is the structure diagram, which (you believe) shows the relationships of the various components within a system. It allows you to graphically represent the system before worrying about the equations which represent the relationships governing that system. You can then go back and insert the equations after you have accounted for all the relationships. As with any modeling language, you are then able to go back and change the inputs to see how these changes will affect the behavior of the system. The manual is extremely well written and not only teaches you how to use STELLA, but also teaches basic modeling techniques.

STELLA:
$295 from High Performance Systems, Inc., 13 Dartmouth College Highway, Lyme, NH 03768; 603/795-4857. Macintosh.

RAPID: There are many factors affecting the development of a nation and its ability to reach its stated economic and social goals. The size of a country's population is one of these factors. RAPID (Resources for the Awareness of Population Impact on Development) attempts to show these population factors and their effects on a nation's long-term plans and policies. It was designed by the Futures Group under a contract with the United States Agency for International Development, primarily to show how family planning can help a developing nation achieve its social and economic goals. It presents the user with a number of graphs, charts and tables which show the results of two different fertility rates, the actual birthrate and a declining birthrate, on various sectors of society. It shows how fertility rates affect demography, health, economy, urbanization, education, and agriculture. There are two versions of this program: a country-specific one, and a generic one for countries which the Futures Group did not specifically model.

RAPID is menu-driven and easy to use. The Futures Group has also developed a sophisticated projection package which can be integrated into the RAPID package to increase its predictive abilities. The Futures Group has purposely kept the price low to encourage wide use of this program.



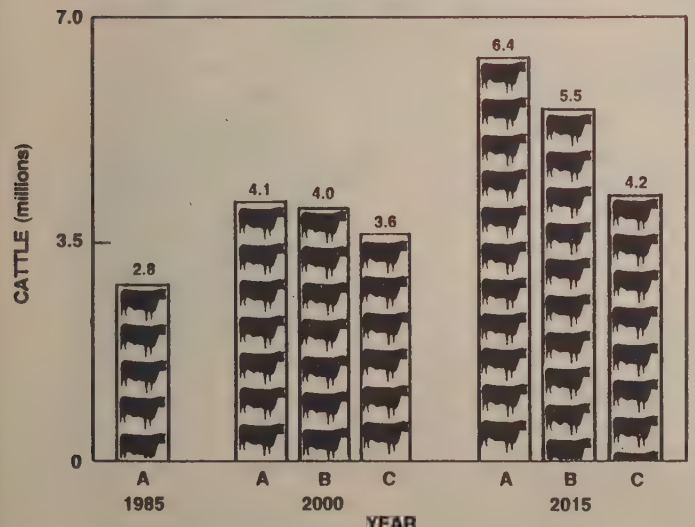

```
Display projection-A,B,C,F10 to end

   Which demographic variable do you want
   to examine:

   1 Historical birth rates, death rates
     and rates of natural increase

   2 Population momentum

   3 Population distribution in a
     Developed Country and Botswana

   4 Total fertility rates for the
     demographic projections

   5 Women aged 15-49

   6 Examine another sector

   7 Examine more options
```

—RAPID

RAPID:
$10 from Ken Yamashita/The Futures Group, 1111 14th Street NW, Washington, DC 20005-5603; 202/347-8165. MS-DOS.

WILDLIFE is a collection of 60 ecological programs for managing wildlands, whether the wildland is your backyard or a national park. Because they were written to encourage computer use in the environmental sciences, they are not copy protected and the authors encourage their free distribution through bulletin boards and disk exchanges. The 60 programs are divided into 10 categories which form the basis of the menu system. These categories include programs which help wildland managers make decisions about animal populations, space and habitats, cybernetics, and water resources. Included are: a program that helps the wild land manager determine the number of deer-hunting permits to issue, a program that helps determine the wind profile which can aid the manager in determining convective heat loss, and a program to show the zone of influence of proposed road accesses. WILDLIFE also contains utility

Required Size of Cattle Herd, 1985–2015



A = High Fertility Continued
B = 5.5-Child Per Woman Average by 2005
C = 3-Child Per Woman Average by 2005

—RAPID

programs which aid the user in math, statistics, social engineering, and payroll. The results are presented in a readable and easy-to-understand format. The programs are all set up so that someone without previous computer experience can use them easily and effectively.

WILDLIFE:

Free from Robert H. Giles, Jr./Dept. of Fisheries and Wildlife Services, 101 Cheatham Hall, VPI and SU, Blacksburg, VA 24061; 703/961-5573. MS-DOS.

CHOP (Computerized Hatchery Optimization Program) is a collection of eight programs designed to help a hatchery increase productivity. It is helpful in all areas of fish rearing, taking into consideration such variables as: type of fish, water temperature, type of container, nutrition, and management objectives. These programs were designed to improve the efficiency of the fish-rearing process and reduce costs. In actual practice, they have helped to improve documentation procedures, and reduced time spent on preparation of hatchery reports.

The programs are well written and easy to use, and the only special knowledge or training one needs would be knowing how to run a hatchery and the knowledge of the normal data associated with that function. CHOP would be useful to anyone considering running a hatchery or doing pond cultivation.

CHOP:

$10 from the American Fishery Society, Computer User Section/Anthony Frank, National Fishery Center — Great Lakes, 1451 Green Road, Ann Arbor, MI 48105. MS-DOS.

TWIGS (The Woodsman's Ideal Growth-projection System) was written by the U.S. Forest Service to help owners of small woodland properties or consulting foresters manage their timberland resources more effectively. Not only does it project the growth and future yields of a timberland, but it runs simulations based on alternative management strategies to see what outcome these activities will have on tree growth and future yields. This allows the harvester to find the maximum sustainable harvest rate.

There are two versions of this program, one for West Coast states and one for Central and East Coast states. The program is menu-driven and is relatively easy to use, but if you do have problems the software publisher allows you two hours of free telephone consultation.

TWIGS:

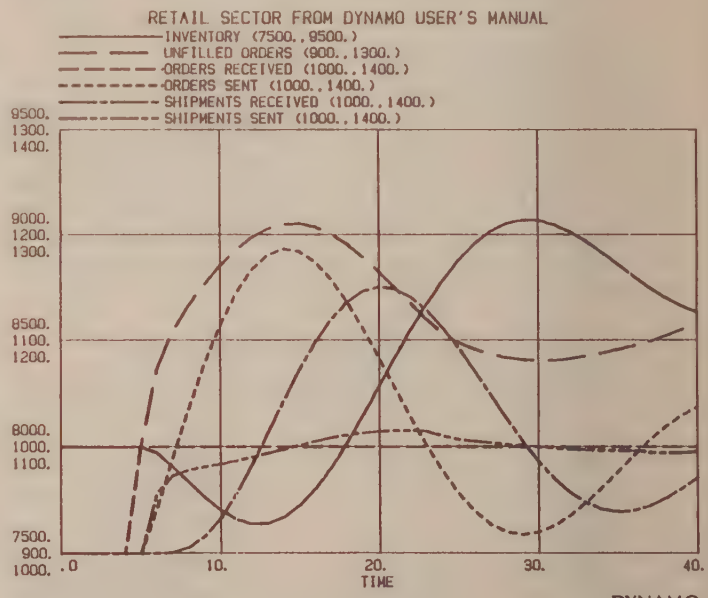
$110 from Forest Resources Systems Institute, Courtview Towers/Suite 24, 201 N. Pine Street, Florence, AL 35630; 205/767-0250. MS-DOS.

Professional DYNAMO Plus is a software tool for creating models of systems with dynamic feedback as their primary characteristic. A number of versions of dynamo are available for the microcomputer; this is the most powerful one. This version is designed for professional modelers who are interested in modeling extremely large systems that require more than 1,000 equations. It allows the user to create a model and then to simulate this model over various time frames. You can then change the input to the system to see how changes will affect the system's behavior.

Professional DYNAMO Plus requires familiarity with causal loop modeling and the ability to translate causal dynamics into algebraic form. For novice model builders, a number of other microcomputer versions of DYNAMO are also available from Pugh-Roberts.

Pro DYNAMO Plus:

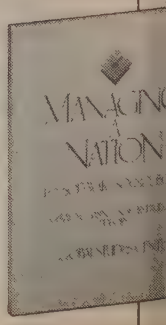
$2,000 from Pugh-Roberts Association, 5 Lee Street, Cambridge, MA 02139; 617/864-8880. MS-DOS.



—DYNAMO

The preceding reviews are excerpted from *Managing A Nation: The Software Source Book,* which reviews management software in the following areas: agriculture, economics, environment and ecology, fisheries, forests, global issues, health, multisectorial issues, politics, population, rural development, security, transportation, urban development and water.

Managing A Nation
Dr. Gerald Barney and Sheryl Wilkins
1986; 85 pp.
$16
postpaid from:
The Institute for 21st Century Studies
1611 N. Kent Street
Arlington, VA 22209
703/841-0048



The Different Drum

Reading Peck's book made me aware of the lack of community in my own life — the place where I can hurt and still be accepted and understood. It both inspired and frustrated me. Where do you find community? How do you build it? I wasn't satisfied with Peck's answer — start your own community — and you might not be either, but read the book for the questions he raises. Naming the disease is the first step. —Corinne Cullen Hawkins

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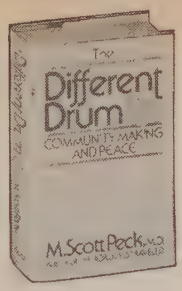
We are so unfamiliar with genuine community that we have never developed an adequate vocabulary for the politics of this transcendence. When we ponder on how individual differences can be accommodated, perhaps the first mechanism we turn to (probably because it is the most childlike) is that of the strong individual leader. Differences, like those of squabbling siblings, we instinctively think can be resolved by a mommy or daddy — a benevolent dictator, or so we hope. But community, encouraging individuality as it does, can never be totalitarian. So we jump to a somewhat less primitive way of resolving individual differences which we call democracy. We take a vote, and the majority determines which differences prevail. Majority rules. Yet that process excludes the aspirations of the minority. How do we transcend differences in such a way as to include a minority? It seems like a conundrum. How and where do you go beyond democracy?

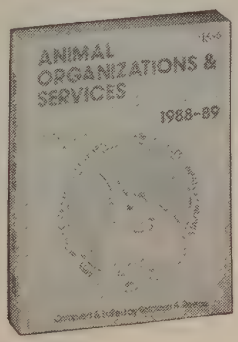
The Different Drum
(Community Making and Peace)
M. Scott Peck, M.D.
1987; 334 pp.
$16.95
($18.95 postpaid) from:
Prentice-Hall
200 Old Tappan Road
Old Tappan, NJ 07675
201/767-5937
or Whole Earth Access



Animal Organizations & Services Directory

The animal-rights movement has been growing so rapidly that it now has its own directory. This is yet another fine example of the kind of organizational good work that one person can do with diligence and a computer. Access is provided to hundreds of national, state and local groups, and to over 250 different periodicals. There is even a "cruelty-free" listing of cosmetic companies that do not use animal testing for their products. Many of the groups listed are truly tiny and generate no advertising, and little publicity. —Richard Nilsen

Animal Organizations & Services Directory
Kathleen A. Reece, Editor
1988; 220 pp.
$16.95
($18.45 postpaid) from:
Animal Stories
16783 Beach Boulevard
Huntington Beach,
CA 92647



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Desert Tortoise Council
5319 Cerritos Ave.
Long Beach, California 90805
Objectives
Comprised of turtle and tortoise clubs, zoos, biologists, museums, and concerned individuals working to assure the continued survival of viable populations of the desert tortoise throughout its native range.

How To Find Missing Persons

"Everybody is somewhere" might be the motto of this hunter's manual. If you can get by the sneering tone of the writing, you'll pick up useful hints. Not all of them are legal, but all will work at least part of the time. You can bet that folks have used many of these methods to check up on you — in the find-'em game, scrupulous is less important than clever, disciplined, patient, and successful. See ya around. —J. Baldwin

How To Find Missing Persons
Ronald George Eriksen 2
1981; 100 pp.
$7.95
($9.95 postpaid) from:
Loompanics Unlimited
P. O. Box 1197
Port Townsend, WA 98368
or Whole Earth Access

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Military Personnel
Are you looking for someone whom you know is in the United States armed forces, but aren't sure where he is stationed?

In this case, all you have to do is send the subject's name (including his middle initial) and social security number, along with $2.85, to World Wide Locator, Fort Benjamin Harrison, Indiana 46216. They will reply with a letter stating where the subject is stationed.

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Case #6
The subject was a 30 year old white male who had skipped on a $7,000 loan.

How Found. The subject's ex-wife eagerly told the operative that the subject had gone to Houston, Texas, to seek work as a welder.

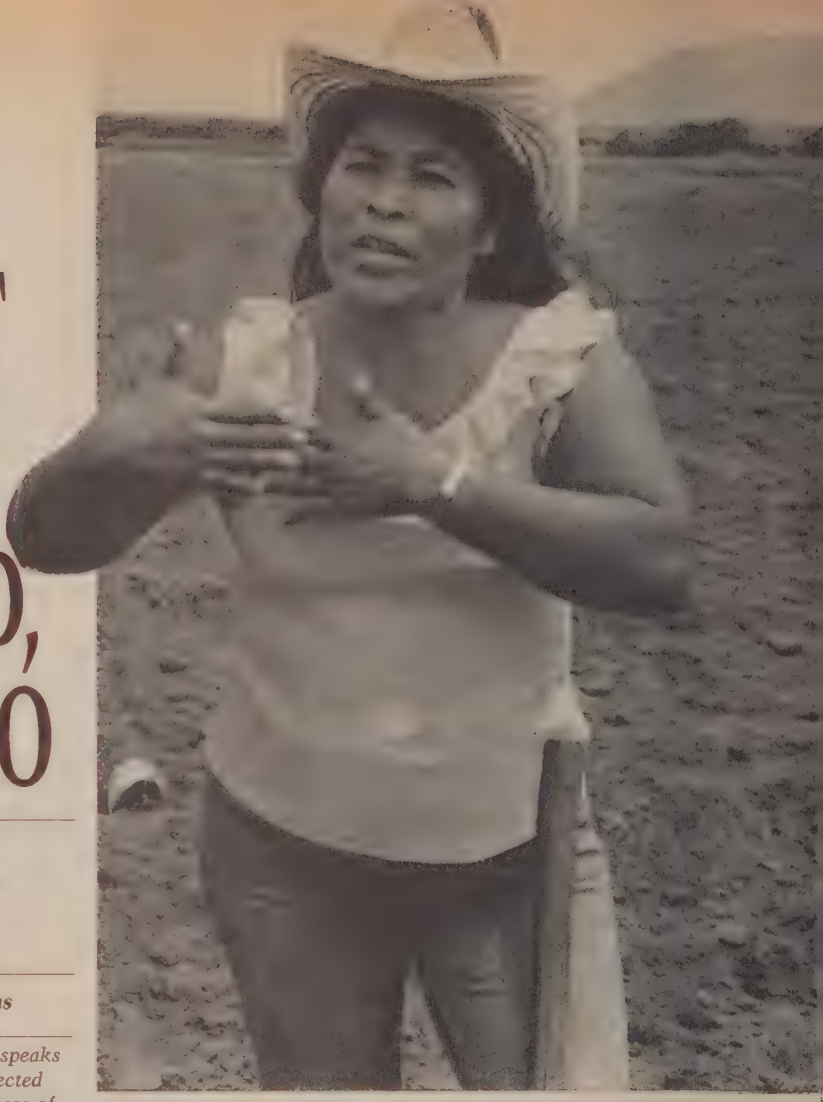
All usual tracing methods proved fruitless. An advertisement offering high-paying jobs for welders was then placed in Houston's leading newspaper. In the ad, prospective employees were directed to send their resumes to a post office box in Houston.

Within three days, the operative received a resume from the subject which contained his new address.

DON'T BE AFRAID, GRINGO

The story of Elvia Alvarado, translated and edited by Medea Benjamin

Photos by Susan Meiselas



Listen to this woman. She speaks from her heart with unexpected directness. The persuasiveness of her arguments lies in something that can only be called "common sense" — a simplicity of logic that is common to all, a fragrance of truth that crosses oceans. Her story has power because she is not singing her own song, but the song of many who are mute with desperation. Her courage lets them be heard.

We only have room for a small portion of her heart. The rest can be found in the book of the same title, from which this has been excerpted. The story of Elvia Alvarado was captured on 30 hours of tape in campesino villages, translated and edited by Medea Benjamin, and published by Food First. Don't Be Afraid, Gringo *is available for $11.45 postpaid from The Institute for Food and Development Policy, 145 Ninth Street, San Francisco, CA 94103; 415/864-8555.*

—Kevin Kelly

Childhood to Motherhood

My father was a campesino. He didn't have any land of his own, so he worked for the big landowners as a day worker. My mother raised chickens and pigs, and baked bread to sell at the market. They had seven children — five girls and two boys.

My mother worked like a mule to take care of us, and we all helped out. We'd get up at three in the morning, in the dark, to help bake bread, make tortillas, feed the pigs, and clean the house. All my brothers and sisters worked hard — the boys in the fields of the big landowners, the girls in our house. At the age of seven, we were all working.

My father never let my older sisters go to school. He couldn't see why girls needed an education, since they'd only go live with a man and have babies. But my mother wanted us to learn, and since I was still young enough she decided to send me to school.

I was in school from the time I was seven until I was 12, but I only finished second grade. That's because the school in the town where I grew up only went up to second grade. But I really wanted to learn, so I kept repeating second grade over and over again — five times — since there was nowhere else for me to go.

I can't say I had a happy childhood. We didn't have any toys; we didn't have time for games. We were too busy for that, since we were always working.

The only happy moments I recall were the dances on Saturdays, when my mother let me go dancing with my girlfriends. There'd be guitar players in the village square, and on special occasions they'd bring in a marimba band.

The other thing I liked was going to church. On Sundays we'd go to catechism class; we'd sing religious songs and learn the prayers. Sometimes the priest would make *piñatas* for us in the square. All the kids in the catechism class would get candy, bananas, and sodas. That was a big treat for us.

I never really had much of a childhood at all.

In those days, no one ever taught us the facts of life. The adults said that children weren't supposed to learn about such things. So we were left to figure it out on our own.

I remember that the first time I got my period I was terrified. I saw that my vagina was bleeding from the inside. I ran into the woods to take off my panties and look at the blood. I went back home, got a pail from the kitchen, and went to bathe myself. I thought that maybe taking a bath would stop the bleeding. But I just kept bleeding and bleeding.

I was so scared that I stuck some rags in my panties and laid down in the bed. I wrapped the blanket around me, covering myself from head to foot.

My mother came in and asked what was wrong, but I was too ashamed to tell her. I said I had a headache, but she knew I was lying. After I'd been in bed a few hours, she finally said, "OK. You better tell me what's wrong, or else get out of bed and get back to work."

So I told her I was bleeding between my legs. "Don't be scared," she said. "All women get the same thing. It'll last about three days and then go away." When I got the same thing the next month, I wasn't so scared because at least I knew what it was.

Nowadays, the kids learn these things in school. But when I was young nobody told us anything.

I started going out with a boy named Samuel. We were both 15 years old and didn't know what we were doing. When we fooled around, I had no idea I'd get pregnant — but I did.

Some women have all kinds of problems when they get pregnant — they get nauseous and lose their appetite, or they have headaches and get real tired. Not me. The only way I ever know I'm pregnant is because I don't get my period. Otherwise I have no other signs.

I worked right up to the last day. When I started getting bad pains, I told the woman I worked for and she took me to the hospital.

I didn't know anything, because it was my first child. But when I felt the labor pains, I just gritted my teeth and clenched my fists until it passed. I didn't cry or anything.

The nurse said, "When you get a really strong pain that doesn't go away fast, push so the baby comes out."

She showed me this cement board they strap you on with your legs wide open — with everything sticking out. She said I should use it when the baby was ready to come out.

I had these pains, and they'd come and go, come and go. Then they started coming faster and faster, until I got this big pain that wouldn't go away. I said to myself, "Ah-ha. This must be what the nurse was talking about."

So I ran over to the board, stuck my legs in the stirrups, and pushed hard. I felt something wet coming out first. And then I felt the baby zooming out, like water rushing out of a bottle when you take the top off. The baby started crying, and one of the other pregnant women ran to tell the nurse.

The nurse came running over, furious. "Why didn't you call me?" she yelled. "You're not supposed to do this on your own." She grabbed the baby, cut his cord, and stuck him in a tub of water.

I don't know why she was so mad. She never told me to call for help, so how was I supposed to know? I just did it by myself. The next day I left the hospital.

After I had my baby, I went back to Lejamani and lived with one of my sisters. Two years later I got pregnant again.

It's very recent that women have started taking pills and things to keep from getting pregnant. When I was young, there was nothing like that. We just got pregnant and had our children.

We were taught that women should have as many children as they can. And we were also taught that when a woman gets pregnant it's her responsibility, not the man's, because she let him touch her. If the man didn't want to marry the woman or help support the child, there wasn't anything the woman could do about it.

When I got pregnant the second time, I didn't bother going to a hospital. I just had the baby at home. I suppose I'm lucky that all my births have been easy; I never had any problems. I've heard the doctors say that when you're pregnant it's good to get exercise so that the child doesn't stick to your stomach. I think that's true, because with all my children I worked and worked until the last minute — washing clothes, ironing, baking bread, grinding corn, making cheese. My stomach would be tremendous. But

when it came time to give birth, one big push and whoosh — they'd come out.

The father of my second child didn't have a job, and he wasn't faithful to me either. On top of that he tried to boss me around. So I decided to raise the child by myself.

The father of my third child was no better. As soon as he found out I was pregnant, he left. So many men in Honduras are like that. They stay with a woman just long enough to have a child, then they disappear and don't do anything to help support the children. They usually don't even admit that the children are theirs.

After my third child, I went to work in the capital as a maid so I could support my children. They stayed behind with my mother. By that time my mother was living on her own, and she wanted the children to keep her company. I earned $15 a month and sent all the money home.

The people I worked for didn't treat me very well. They were always yelling at me for something — that I didn't cook the food right, that I burned a pot, that I broke a dish. If I broke something, they'd take it out of my salary. I'd get so nervous whenever mealtime came around, because I knew they'd yell at me for one thing or another.

Part of my job was feeding their dog. You should've seen the food that dog got! Sometimes he got the leftovers, but sometimes I'd make a special meal for him. My boss would give me meat, tomatoes, and oil and tell me to cook it up for the dog.

And every time I fed that dog, I'd think of my own children. My children never got to eat meat. The $15 a month I sent them was hardly enough to buy beans and corn. But that dog got meat almost every day.

I wasn't allowed to eat the same food the family ate. I'd get beans, tortillas, and rice. The family would eat in a beautiful, big dining room, and I'd eat in the kitchen with the dog. So sometimes I'd steal the dog's food. I knew he wasn't about to say anything, so I'd swap dishes with him. But I always wished I could wrap the food up and somehow get it to my children.

I only got time off to visit my children every three months. I'd leave early on Saturday and return Sunday night so I could be back at work on Monday. Aside from that one weekend every three months, the rest of the time I never had a fixed day off — only when they felt like giving it to me.

I stayed there for two years. Then I returned to Lejamani.

It was there that I met Alberto and we started living together. I left my children with my mother because she wanted to keep them. But a few months after Alberto and I started living together, the children told me they wanted to come live with us.

Alberto and I had three children together. While he worked out in the fields, I stayed in the house taking care of the children, cleaning, making bread to sell, collecting milk from the landowners to make cheese — anything to earn a few pennies.

Part of the time we were happy together, but Alberto had the same problem my father did — he liked to drink. So while I scraped and saved to buy food for the children, he would spend his money on booze. But at least he didn't hit me like my father hit my mother, and he was good to his own children. That's why I stayed with him.

Taming Macho Ways

When I started working with the mothers' clubs in the Catholic church, it was the first time I realized that we women work even harder than the men do.

We get up before they do to grind the corn and make tortillas and coffee for their breakfast.

Then we work all day — taking care of the kids, washing the clothes, ironing, mending our husband's old rags, cleaning the house. We hike to the mountains looking for wood to cook with. We walk to the stream or the well to get water. We make lunch and bring it to the men in the field. And we often grab a hoe and help in the fields. We never sit still one minute.

It's true that there are some jobs that require a lot of strength and that women can't do as well as men. For example, when we have to clear a piece of forest, it's the men who go out with the axes and cut down the trees. Other work we consider "men's work" is chopping firewood and plowing the land with a team of oxen. These are things that men do better than women, because they're stronger. I don't know if it's a physical difference from birth, but the fact is that here in Honduras women are usually either pregnant or nursing, and that takes a lot of energy out of you.

Men may be out working during the day, but when they come home they usually don't do a thing. They want their meal to be ready, and after they eat they either lie down to rest or go out drinking. But we women keep on working — cooking the corn and beans for the next day's meal, watching the children.

Even when we go to sleep, we don't get to rest. If the babies wake up crying, we have to go take care of them — give them the breast if they're still breast-feeding, give them medicine if they're sick. And then if our husbands want to make love, if they get the urge, then it's back to work again.

The next morning, we're up before the sun, while our husbands are still sleeping.

In some families, like the workers in the city, I've seen men help women in the house. But I've never seen it in a campesino home. Even if the man has no work and sits at home, he won't help out.

I have a friend in the city who works in a factory. If he comes home from work and the meal isn't ready — maybe his wife is busy watching the children or washing clothes — he just grabs the pots and pans and gets to work. I've seen it with my own eyes. He actually cooks the meal for the whole family. You'd never see that in a campesino house!

I don't think it's fair that the women do all the work. Maybe it's because I've been around more and I've seen other relationships. But I think that if two people get together to form a home, it should be because they love and respect each other. And that means that they should share everything.

Elvia talking to villagers.

The problem some campesina women have is even worse. Not only do their husbands refuse to help, but they don't even support the family. They don't give her money to put food on her children's plates.

When the men find work, they earn a few dollars a day. The campesino with better habits gives all his money to his wife; maybe he keeps 50 cents to buy cigarettes. The campesino with bad habits gives his wife less. If he earns $2.50, he gives her one dollar and keeps $1.50 for himself.

If the woman complains and asks why she only gets one dollar while he gets $1.50, he says, "That's none of your business. I earned the money and it's mine to spend as I please." What can the woman say? If she still complains, she's asking for a fight.

That's why so many campesina women have to work. They fatten pigs or raise chickens, bake bread or sell tortillas in the market — anything to make a few pennies to feed their children.

Machismo is a historical problem. It goes back to the time of our great-grandfathers, or our great-great-grandfathers. In my mind, it's connected to the problem of drinking. Drinking is man's worst disease. When men drink, they

fight with everyone. They hit their wives and children. They offend their neighbors. They lose all sense of dignity.

How are we going to stop campesinos from drinking? First of all, we know the government isn't interested in stopping, because it's an important source of income. Every time you buy a bottle of liquor, part of that money goes to the government.

That's why the government doesn't let the campesinos make their own liquor, because the government doesn't make any money off homemade brew. So a campesino can go into town any time, day or night, spend all his money, and drink himself sick. But if he gets caught making *choruco* — that's what we call homemade spirits made from corn and sugar — they throw him in jail. The government wants the campesinos to drink, but only the liquor that they make money off of.

If we're ever going to get campesinos to stop drinking, we first have to look at why so many campesinos drink. And for that we have to look at what kind of society we have. We've built up a society that treats people like trash, a society that doesn't give people jobs, a society that doesn't give people a reason to stay sober. I think that's where this vice comes from.

I've seen what happens when campesinos organize and have a plot of land to farm. They don't have time for drinking any more, except on special occasions. They spend the day in the hot sun — plowing, planting, weeding, irrigating, cutting firewood for the house, carrying the produce to market. Most of them are very dedicated to their work and their families.

So I've noticed that once the campesinos have a purpose, once they have a way to make a living and take care of their families, they drink less. And they usually stop beating their wives, too. And I've seen that once the women get organized, they start to get their husbands in line.

Marriage campesino style

Among campesinos, men and women hardly ever get married — legally, that is. They just live together. My older son got married in the church, because his girlfriend insisted. She wouldn't give him anything until he agreed to marry her, so what could he do? When my son got married, his wife was still a *niña*, a girl — that's what we say here in Honduras when a woman hasn't been tried out by a man yet.

You see, the boys here are really bad. If the girl is loose and will give him what he wants without getting married, why bother? But sometimes the girl says, "No, I want to get married. And if you don't marry me then nothing doing." So he tells her that he wants to marry her. But if she gives in and lets him try her out, forget the marriage. If she holds out, then if he really wants her he'll have to get married.

None of my other children got married. It's all the same to me. Married or not married, it's the same life. Married women have more rights — for example, if the husband dies all his posessions go to his wife. But us poor people, what possessions do we have? None. So what difference does it make?

The church wants us to get married. Some priests go around trying to convince couples who are living together to get married. Some people give in, but most don't.

Look at me with Alberto. We lived together for 18 years. The priest that used to come here to give mass would tell us to get married. And my mother, who's a devout Catholic and spends her life praying, told us to get married. One of my brothers even tried to convince Alberto to marry me.

At first Alberto refused. He simply said no, he didn't want to be married. But after I started working with the church and getting liberated, that's when he wanted to get married. And then I was the one who didn't want to. I wanted my freedom.

Most men don't want to get married because they say that marriage ties them down. They say that if they get married, they can't have a woman on the side. But if they don't get married, they say they're free and have the right to have two women.

I've heard that there are men and women who make love in all different ways, but we campesinos don't know anything about these different positions. We do it the same all the time — the man gets on the woman and goes up and down, up and down, and that's it. Sometimes the woman feels pleasure and sometimes she doesn't.

We don't have any privacy either, because our houses are usually one big room. So we have to wait until everyone is asleep and then do it very quietly. We just push down our underpants and pull them back up again.

We like to have sex, but we don't let the men see us nude. That's just how we are. As soon as girls are born, their vaginas have to be covered all the time. We never change in front of men; we even take baths with our bras, panties, and slips on. And that's how we sleep, too. Take me and Alberto. We lived together for 18 years and never once did he see me naked.

Not many campesina women use birth control. They just keep having babies, babies, and more babies. I only have six children, which might be a lot in your country but it isn't a lot here. Most campesinas have eight, ten, even twelve children.

I've thought a lot about why we have so many children, and I really don't know why. The men

Elvia in her kitchen.

want their wives to have as many children as they can. And most women want a lot of children, too. They think it's only natural.

Part of the reason might be the Catholic church. Most of us are Catholics, and the church tells us that it's natural to have children and that going against nature is going against God.

We campesinas don't have abortions, either. Middle- and upper-class women have abortions when they don't want the child or when they're afraid of gossip because they're not married. It's illegal, but they have their ways. But the only time campesinas abort is when they're sick and lose the child by accident. We don't abort on purpose; it's not part of our culture.

I never talk about family planning in the campesino meetings. There's one campesino group, ANACH, that gets involved in family planning, because it's a government organization and the government tells it to. They go around telling the campesinos not to have so many children.

But the campesinos get mad; they don't like anyone telling them that.

So our group doesn't talk about it. First of all because the campesinos say it's a personal matter, and secondly because there are plenty of other groups that teach about family planning. The church teaches people the rhythm method. The health clinic gives talks about IUDs and pills and all that stuff. And the government has programs on the radio. So we don't have to get involved in those questions.

I personally don't think it's good to have lots of children if you can't maintain them. It breaks my heart to see children suffering because their parents can't afford to feed them. So I think it's good to plan.

My daughters take birth control. I told my daughter Clara that her husband is too poor for her to have another child right now. She has one child, and I think she should wait a few years before having another one — and that's it. Two children are plenty these days.

But to tell you the truth, I don't like my daughters using that birth control, because of all the problems it causes. Those pills do a lot

of harm to women here. Maybe they don't affect the gringas so much, because they're more resistant than we are. They're stronger and better fed. But not Honduran women; many of them get sick.

The worst thing we get is cancer. Here in my village six women died recently from vaginal cancer. Before we never had that kind of sickness. At least I'd never heard of it before. But now lots of my friends are dying from it. Some were using pills, others were using IUDs. My sister's in the hospital right now, dying of cancer of the uterus.

I once asked a doctor friend of mine, Dr. González, if it's true that birth control causes cancer. He said they haven't been able to prove it yet, but that he was worried about the big increase in women's cancer. All the women I know are scared to death about getting cancer.

Some women think that having your tubes tied causes cancer. I did it because I had to — I had high blood pressure, and it would have been dangerous for me to have more children. But most women are afraid to do it. Other methods like the IUD give lots of infections. And you have to remember that when we get sick it's hard for us to get to a doctor. The nearest clinic is far away. And even if we could see a doctor, we can't afford to buy the medicine. I know a woman who had to pay $60 to get rid of an infection in her vagina. That's more than most of us make in a month!

A lot of this money for family planning comes from the United States. What I want to know is why the United States sends us all these birth control gadgets without sending us anything to protect us against the diseases they cause? Why don't they send any medicine to stop us from getting cancer? And if there is no medicine to stop it, then they should stop sending the birth control. How can the United States go around pushing a program without thinking it through? That's just not right.

The United States gives millions of dollars to stop Hondurans from having children. I don't understand why they're so interested in our personal lives. Some say the gringos just want to get rid of poor people. Others say that the United States sees poor people as potential guerrillas, so the fewer children they have, the fewer guerrillas. I don't know, but that's what they say.

The Church Opened Our Eyes

After I'd been living with Alberto for 15 years, I began to work with the mothers' clubs that the Catholic church was organizing. At the meetings we'd talk about our problems and try to help each other out. We also did practical things like distribute food to malnourished children, grow gardens, and go to talks about food and nutrition. And we'd pray together, too.

At first Alberto didn't want me going to the meetings at the church, but I refused to listen. "I have every right to go out," I told him. "I'm not doing anything bad like you're doing — going out to get drunk and spend the little money we have. I'm trying to do something good."

I loved going to the meetings. It became the high point of my week, because it was a chance to get together with other women and talk about the problems we had in common — like how to keep our children fed and our husbands sober. We learned that we had rights just like men did. We learned that we had to stop being so passive and start sticking up for our rights.

I became very active in the club and was elected president. About a year later, the church invited me to a week-long course for social workers. They invited 15 women, and at the end of the course I was chosen as one of five women who'd be paid by the church to travel all around the area organizing more mothers' clubs.

They divided the five of us up by sector. I was to cover La Libertad, up in the mountains. I was supposed to visit all these small communities — La Candelaria, Campo Dos, El Indio, Valle Sucio, Lajas, La Colmena. I'd never even heard of any of them before.

Our main job was to organize the women so we could distribute food to the most malnourished children. First we had to make a list of all the young children and their ages, whether or not they were breast-fed, and which women were pregnant. Then we were supposed to help them set up a feeding program.

I loved the work. I'd go from village to village organizing the women, setting up feeding programs. And we didn't stop there. We planted gardens; we even got construction materials and started building roads. You see the nice roads we have in this village? Some of them we built ourselves through the mothers' clubs. Together with the other women organizers, we set up a tremendous women's organization throughout Comayagua.

I still thank the church for having opened my eyes. Working with the mothers' clubs, I learned how important we women are and how important it was for us to get organized.

Those of us who were the main organizers were being paid by the Catholic church. We didn't get much money, but it was enough to keep us going. We managed to set up dozens of mothers' clubs. The women were well organized, and were taking on all sorts of activities.

Then all of a sudden the church pulled the rug out from under us. It stopped the program and took away all the funds.

Why? They said there was no more money, but we don't think that's what happened. We think they were afraid of how far we'd come.

It was the church that first started organizing us women. I'd never done anything before getting involved in the mothers' clubs. The church forged the path for us, but they wanted us to follow behind. And when we started to walk ahead of them, when we started to open new paths ourselves, they tried to stop us. They decided that maybe organizing the women wasn't such a good idea after all.

They wanted us to give food out to malnourished mothers and children, but they didn't want us to question why we were malnourished to begin with. They wanted us to grow vegetables on the tiny plots around our houses, but they didn't want us to question why we didn't have enough land to feed ourselves.

But once we started getting together and talking to each other, we started asking these questions.

We came to the conclusion that there were three classes in Honduras: the upper, the middle, and the lower class. The upper class are the rich people — the landowners, the factory owners, the politicians. They're the ones that have the power. The middle class are the workers in the city. They don't have as much money or power, but they're better off than we are. We're at the bottom of the ladder, especially the campesina women. Because not only are we exploited by the other classes, but by men as well.

So we started talking about the need for some changes. And then the very same church that organized us, the same church that opened our eyes, suddenly began to criticize us, calling us communists and Marxists. It was at this point that the church abandoned us.

The real Honduras is hidden

If you visit Honduras and just drive along the main highway, you might think Honduras is a rich country. The road is all smooth and paved, and the people who live alongside the highway look pretty well off. But most Hondurans are campesinos who live far removed from the highway. They live in what we call *asentamientos*, or settlements. These are villages that are not even connected to the highway by a road. Oftentimes the only way to get to these asentamientos is hidden from view, but for most campesinos it's the only reality we know.

For the campesinos in the asentamientos, it's hard to make a living. If they have any land at all, it's usually the worst land — hilly with poor soils. Because the best land is the flat land the big landowners own.

The campesinos who have land of their own plant corn and beans for their families to eat. When harvest time comes, they put part of the crop aside and sell the rest. They need money to buy things like clothing, medicine, and any food they don't grow themselves.

Whenever there's a family crisis, they have to sell off part of their food to get cash. So they often run out of beans and corn to eat and have to go into town and buy them at the marketplace — for double the price they sold them for. The campesinos are always selling cheap and buying dear. That's why they never get ahead.

The guys with the fat wallets, the middlemen, come into the village and buy the campesinos' crops for next to nothing. But the campesinos need the money and have no choice. Who else can they sell to? How can they get their crops to market? There are no roads to their villages, no buses that stop there. The only transportation is their mules and their own backs.

Campesinos who don't have land are even worse off. They work as day laborers, either for a landowner or for another campesino who needs help. The daily wage in the countryside is $1.50 to $2.50 a day. But even with those low wages, they can't find enough work.

Many campesinos are forced to migrate in search of work. When it's time to harvest coffee, they go to the mountains where the coffee is. They stay for a few months. Sometimes they take their families along so everyone can help. Sometimes the men go alone. In the south there used to be temporary work in the cotton fields, but no one seems to grow cotton any more.

The campesinos live on tortillas and beans — three times a day, every day. When we have the money, we buy other things like rice, sugar, coffee, and cooking oil. Sometimes eggs. Those of us who live in the valleys can't raise our own chickens, because there's a disease that kills them all off. Only women that live higher up can raise chickens.

We don't have money to buy milk or meat or anything expensive like that. We buy cheese sometimes, because you can buy it in small amounts — ten or twenty cents' worth. And once in a while we buy bread at two and a half cents a roll.

We know what a good diet is. We know that a good diet has all sorts of things in it — milk, eggs, meat, vegetables. But we poor people can't afford those things. A bottle of milk costs 30 or 40 cents. With that money we could buy enough tortillas to feed the whole family.

The woman does all the cooking. When the man gets home, he eats by himself or with the children. The woman eats later.

We don't sit down to meals together like the rich people do. We don't have a special time to eat, either. We just eat when we're hungry. Not like the rich people who wait for 12 o'clock and all sit down together to enjoy this great banquet. Since we don't have much to eat, we don't make a big ceremony about it. ►

Elvia and women from a cooperative, working on recovered land.

We don't use forks and spoons and knives like the rich; we use our fingers. The food tastes better that way. A fork doesn't have any flavor — it's just a piece of metal. And you can poke your mouth with a fork or knife. That's why we like our fingers better.

When I go to the city and eat in the market, they serve me with a fork and knife. But I just use my fingers, and I lick them clean. Sometimes the people in the city look at me funny when I'm licking my fingers. But who cares, as long as the food tastes good!

Jesus was an organizer

I was brought up Catholic, and I go to mass every Sunday when I'm home. I like to listen to the sermons. And when they're celebrating mass in one of the communities I'm visiting, I always go in and listen. I even listen to the people preaching in the street, because they're speaking in the name of the Lord.

Here we baptize children when they're a few months old. When we can, we dress them up pretty in a white dress. Even the boys get dressed up that way, if the parents can afford it. I was baptized and so were all my children.

When a man and woman live together without getting married, in what we call a "free union," the Catholic church says they live in sin. They can't go to confession because they can't receive the host if they're living in sin. And if you're not married and you want to baptize your child, the two parents can't go to the church together. Only one can go with the child.

I haven't taken confession in years, from the time I was a child. That's because I was living with a man and wasn't married. So I go to the mass, but I don't take confession. My children don't confess either. The people that confess are usually the youngest and the oldest — the ones that don't do so many bad things.

My mother is very religious. She's one of those old ladies that spends her life in the church. She just prays and prays, day and night. We have a very different idea of what religion is. She doesn't understand what my work is about, why I want to make changes in the way we live. She thinks we should be thankful for the little we

have and leave well enough alone. I suppose she thinks that if she prays enough, God will come down from the sky with a plate of beans for her to eat.

But I don't think that God says, "Go to church and pray all day and everything will be fine." No. For me God says, "Go out and make the changes that need to be made, and I'll be there to help you."

For me, the story of Christ proves we can make changes if we fight hard enough and if we never lose faith in what we're fighting for. Remember when Christ was captured and put on the cross with two others? One was a thief, and I can't remember what the other one was. Maybe he was a thief, too.

When they were on the cross, one of the thieves said to Christ, "Hey, I thought you were so powerful. If you're really the King of Kings, why don't you save yourself? Why don't you save the both of us?" Christ kept his head down and didn't answer him.

Then the other one said, "Hey, Christ. When you're in paradise, remember me." He was saying that Christ should remember that they'd been captured together, that they'd been tortured together. And Christ answered this one. He said, "On this very day you will be with me in paradise."

That's the same as it is today. There are plenty of poor campesinos who don't believe in our struggle. They say, "Elvia? Hah! Why should I believe in Elvia? She's just a poor campesina, a nobody. No, I believe in so-and-so, because he's got bucks. He's got a car. He has a tractor. Maybe I can get him to plow my land. He can help me, that's why I listen to him. But Elvia. Hah! What could Elvia possibly do for me?"

There's a saying that goes, "As long as the poor don't believe in each other, they will continue to be poor." And that's the truth.

All this has a long history. It's just like the life of Christ. Just like there were people who refused to believe in Christ, so there are campesinos who don't have faith. Just like they captured Christ and tortured him, so the soldiers capture and torture us. And just like Christ died for the poor, so we die for the poor. The day they kill me, I'll know that I died for a just struggle. I'll know I died like Christ did, fighting for the poor.

Turn your tears into strength

When I hear that all this military buildup in Honduras is just trying to maintain peace in our country, I ask myself what peace they're talking about. Maybe it's peaceful for the politicians. The congressmen make $3,000 a month; their bellies are full of food and drink; they've got a wad of bills in their pockets. So for them there's peace.

But not for the campesinos. Do you think a mother who can't send her children to school because she doesn't have any clothes to put on their backs feels at peace? Do you think a mother who watches her child die because she doesn't have a penny to take her to the doctor feels at peace?

We don't need the U.S. money. We never get to see any of it anyway. What do you think that money goes for? To the foreign bank accounts of the rich, to line the pockets of our corrupt politicians, to give the military more power to repress the poor.

It's the rich who need the U.S. aid, not the poor. We've lived for years with only our beans and tortillas, and we'll go on living with our beans and tortillas. If the U.S. stopped sending money, it would be the rich who'd be hurt, not us. They're the ones who live off the dollars.

I must admit that sometimes I get so overwhelmed by the odds against us that I break down and cry. I see our children dying of hunger, and the ones that live have no jobs, no education, no future. I see the military getting more and more repressive. I see us being persecuted, jailed, tortured. I get exhausted by all the internal problems between the campesino organizations. And I see all of Central America going up in flames.

I start to wonder if it's worth it. I start to think maybe I should just stay home making tortillas.

But whenever I have these doubts, whenever I start to cry, I put my hands into fists and say to myself, "Make your tears turn into anger, make your tears turn into strength." As soon as I stop crying, I feel a sense of power go through my body. And I get back to work with even more enthusiasm, with more conviction than ever.

Hondurans don't want to be beggars. We're tired of begging from the United States. We want to be equals. And to be equals we need more than charity; we need solidarity.

I'd say the best way to show solidarity with us is not by sending food or clothing or dollars. No. Show your solidarity by telling your government that Honduras belongs to the Hondurans. Tell your government to get out of our country and leave us alone. And stand by us in our struggle.

We're not asking for food or clothing or money. We want you with us in the struggle. We want you to educate your people. We want you to organize your people. We want you to denounce what your government is doing in Central America.

From those of you who feel the pain of the poor, who feel the pain of the murdered, the disappeared, the tortured, we need more than sympathy. We need you to join the struggle. Don't be afraid, gringos. Keep your spirits high. And remember, we're right there with you! ■

I . . . Rigoberta Menchú

One of the most shattering books I've read in years: goes straight to the soul.

In first-person monologues, twenty-three-year-old Rigoberta Menchu describes her relationship with nature, life, death, and her community and reveals the cultural discrimination and genocide waged against Guatemalan Indian tribes today. In large part this is the story of all the indigenous peoples of the Americas. But it's also deeply personal, a gift of a human voice that whispers across the immense gap between the nature-based society of the Quiche Indians and our modern capitalistic societies.

If you think you only have time to read one book about Central America, read this one, because it will demand of you to read more. —*Jeanne Carstensen*

I . . . Rigoberta Menchú
Elisabeth Burgos-Debray, Editor
1983; 251 pp.
$11.95
($13.45 postpaid) from:
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New York, NY 10009
212/244-3336
or Whole Earth Access

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Before the seeds are sown in the ground, we perform a ceremony. We choose two or three of the biggest seeds and place them in a ring, candles representing earth, water, animals and the universe (that is, man). In our culture, the universe is man. The seed is honoured because it will be buried in something sacred — the earth — and because it will multiply and bear fruit the next year. We do it mainly because the seed is something pure, something sacred.

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I came to the conclusion that I hadn't had a childhood at all. I was never a child. I hadn't been to school, I hadn't had enough food to grow properly, I had nothing. I asked myself: 'How is this possible?' I compared it to the life of the children of rich people I'd seen. How they ate. Even their dogs. They even taught their dogs only to recognize their masters and reject the maids. All these things were jumbled up in my mind, I couldn't separate my ideas. That's when I began making friends from other villages in Uspantán. I asked them: 'What do you eat? How do you make your breakfast? What do you have for lunch? What do you eat for supper?' And yes, they said the same: 'Well, in the morning we eat *tortillas* with salt and a little *pinol*. At midday, our mother brings *tortillas* and any plants she finds in the fields.' 'At night we eat *tortillas* with chile,' they said, 'chile with *tortillas*, and then we go to sleep.' So everything was the same. It gave me a lot to think about. I have to tell you that I didn't learn my politics at school. I just tried to turn my own experience into something which was common to a whole people.

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If I tried to recount the number of times I'd gone hungry in my life, it would take a very long time. When you understand this, when you see your own reality, a hatred grows inside you for those oppressors that make the people suffer so. As I said, and I say it again, it is not fate which makes us poor. It's not because we don't work, as the rich say. They say: 'Indians are poor because they don't work, because they're always asleep.' But I know from experience that we're outside ready for work at three in the morning. It was this that made us decide to fight.

Cuzcatlán

Cuzcatlán *(the aboriginal name of El Salvador) tells the history of four generations of a Salvadoran peasant family from 1936 to 1981. The story is framed by great-granddaughter Lucia, riding on a microbus in 1981 toward the capital. From the bus, on which she and her mate run into a life-or-death situation with the military forces, the mostly first-person narrative shifts back and forth through time into the past of Lucia's family. It's a history of constant hardship — in the indigo fields, on depleted plantation land, and struggling against the brutal military — but also of inspiring perseverance based on faith and love of life.*

Lucia says at the beginning of the story, "The key is to learn how to hide your emotions. That's very characteristic of this war. We're not even allowed to cry." The image of unreleased tears is repeated throughout the novel: silence as survival. I recently rode on a microbus headed toward San Salvador, and I could only guess at the lives hidden behind the dark, stern eyes of the passengers. This book breaks that silence. It's like hearts exploding at last into a long, sad song.
—*Jeanne Carstensen*

Cuzcatlán:
Where the Southern Sea Beats
Manlio Argueta
1986; 255 pp.
$7.95
($8.95 postpaid) from:
Random House
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Westminster, MD 21157
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Nobody told Ticha, but she could tell that in the beginning everything was calm, silent, waiting, immobile, hushed; the expanse of sky was empty. There was no Adam, no Eve, no birds, no fish, no crabs, no rivers, no ocean, no ravines for catching coati, no stars, no suns, no trees, only the sky like a vast, dark mountain range, infinitely black. Immobility and night. And Gucumatz, the Creator. When he made the mountain and river guardians — birds, pumas, snakes, pacas, coati, and ants — he also opened a door letting in the light. And there was day. When the door closed it was night. God was the light. The Maker of Forms. It is light that gives everything form.

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Without corn we are nothing. We're living corpses. Corn is our light and life. That's why they came to burn our cornfields. The authorities say the corn we plant isn't meant for us but for the subversives. No matter how many times we deny it they refuse to believe us. As though we didn't need to eat! The *guardias* don't even check to make sure we've got a bit of corn left for our daily meal. They take all our grain.

•

The Protestants hadn't shown up yet, nor had any of those churches that send gringos down here like traveling salesmen, going door-to-door with their ties and black attache cases, white shirts, and babyfaces — looking like they've never so much as broken a plate. They tell you they're merely investigating anything relating to the insurrections of the poor. Because anything remotely connected to demand for higher wages or any sort of rights is considered Communist, and then they bring the machine guns in. There's no way out and no law offers any protection . . . [Our laws] are based on a desire to shit on the poor. For that reason we have no faith in the gringos who go from hut to hut with a Bible in their hand and a pistol in their attaché case.

Mud at Camp Pontanezen [France] was made passable by laying sections of duckboards. Butler carried one in himself, earning the nickname "General Duckboard."

Maverick Marine

Several times over the years I've come across this insightful quotation:

"I spent 33 years and 4 months in active service as a member of our country's most agile military force — the Marine Corps. I served in all commissioned ranks from second lieutenant to Major General. And during that period I spent most of my time being a high-class muscle man for Big Business, for Wall Street and for the bankers. In short, I was a racketeer for capitalism. I suspected I was just part of a racket all the time. Now I am sure of it. Like all members of the military profession I never had an original thought until I left the service."

—Smedley D. Butler (1935)

What made it remarkable was its source, a Marine Corps general. My curiosity was piqued, but the general remained an unknown until I came upon his biography, ***Maverick Marine****.*

Smedley was a high-school dropout from a Quaker family who ran off to join the marines, where family connections got him a commission. He saw combat in the 1898 invasion of Cuba, and again in the Boxer Rebellion in China, where he made captain at 19. As the Corps became our hemispheric police force he stayed busy — after becoming a hero of the 1909-1912 occupation of Nicaragua, he went on to Mexico, followed by a four-year tour suppressing Haitians that produced his second (!) Congressional Medal of Honor.

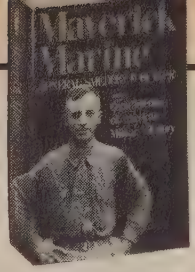
His hopes of becoming Marine Corps Commandant faded as Naval Academy types took over the Corps, and he resigned in frustration. It was the era of the Great Depression, millions were jobless, civil unrest was rising, and the Left and Right were mobilizing. Smedley, one of the best-known personalities of the day, was in demand as a speaker and was expected to align with conservatism. He chose to become a free spirit instead, the original "loose cannon," and went on to confound and delight the country. His career is a guided tour of America's rise to international power, as well as the means that accomplished it. *—Dick Fugett*

•

His anti-imperialist, anticapitalist rhetoric was offset neatly by vigorous support for domestic law and order. The issue was justice and morality, boldly asserted in terms of duty-bound American manliness. Likewise, his antiwar theme was complemented by unflinchingly militaristic support for national defense. He was always the patriot and battling marine, never the sniveling pacifist or convoluted ideologue. The marriage of extreme left- and right-wing themes enhanced his warrior method of attack. . . .

POLITICS

Maverick Marine
Hans Schmidt
1987; 292 pp.
$28
($30.50 postpaid) from:
University Press of Kentucky
P. O. Box 6525
Ithaca, NY 14851
800/666-2211



or Whole Earth Access

Military Incompetence

This is not another tirade about $400 Pentagon toilet seats. The author is a former army intelligence officer and congressional consultant whose thesis is that certain tendencies — bad intelligence, political expediency, service rivalry, poor training and an officer corps selected for political rather than military skills — permeate our armed forces. He examines five actions that made big headlines — the Sontay prison raid in North Viet Nam, the rescue of the Mayaguez, the attempt to free the Iranian hostages, the Beirut "peacekeeping" effort, and the invasion of Grenada — and points out severe glitches in each operation. He has no qualms about their morality.

The book can be read on several levels, for Gabriel's research and personal contacts provide rousing good war stories as well as new understanding of the military. Whether you regard our armed forces as defender of the "free world," the empire's police force, or someplace your boychild might end up, there's good information here. *—Dick Fugett*

[Suggested by Anne Herbert]

•

[From "The Iran Rescue Mission"]
Since all aircraft and helicopters at Desert 1 kept their engines running, the engines of the C-130s which had arrived on time had been running on the ground for almost an hour and a half. It had been decided to keep the aircraft engines running to eliminate any risk of not being able to restart them. Thus, refueling was done with all engines running, in the dark and with no lights, and with a great deal of dust and turbulence within a very small area. As helicopter #3 lifted away from its tanker to make room for another helicopter to take on fuel, it wobbled and went into an extreme bank. Its main rotor blades struck the C-130 tanker behind the cockpit, and both helicopter and tanker exploded. The five-man crew of the C-130 perished in the cockpit, as did the three Marines aboard the helicopter. The munitions aboard the C-130 began to explode, and projectiles struck some of the helicopters waiting to take on fuel. Amid earshattering noise, fire, and confusion, the on-site commander decided to abandon Desert 1 as rapidly as possible. He also decided not to destroy the remaining helicopters or to sanitize them of the classified material left on board. Leaving the helicopters on the ground, the party boarded the remaining three C-130s, loaded the wounded aboard, and took off for Masirah. The problems which had plagued the mission in practice — on-time navigation and refueling — had turned Desert 1 into a disaster.

Military Incompetence
Richard A. Gabriel
1985; 207 pp.
$7.95
($9.95 postpaid) from:
Farrar, Strauss & Giroux
Attn.: Customer Service
19 Union Square West
New York, NY 10003
212/741-6900
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THE DISHARMONIC CONVERGENCE

THE FAR LEFT AND THE FAR RIGHT AS STRANGE BEDFELLOWS

BY JAY KINNEY

ILLUSTRATIONS BY DAVID SUTER

IF ONE WERE TO PAY serious attention to the pundits of the mass media — always a risky proposition — a curious fact would soon make itself evident. In the wake of the new Democratic majority in the Senate, the recent stock market crash, the defeat of Bork's high court nomination, and, lo, the infighting among the TV evangelists, the liberal commentators are busy trumpeting the end of the Reagan era and the imminent demise of conservatism.

Meanwhile, the deep thinkers of the right — bolstered by the lackluster performance so far of the nonentities competing for the Democratic presidential nomination, and the general lack of ideas among the left-of-center politicians — are clucking their tongues over the bankruptcy of liberalism.

In a sense, both views are accurate: the conservatives and liberals alike are irrelevant to tackling the problems confronting us. This realization among increasing numbers of people has led to the search for a new political analysis and a workable economics that transcend the limitations of the old left/right debate.

Yet, because the mass media and the political and business institutions of our society have a vested interest in maintaining the status quo — even as it crumbles — it is nearly impossible to engage in a public discussion of alternatives. Any alternate approach to government or economics inevitably involves rejuggling the power relations of society, and that is the last thing that those who monopolize the public arena wish to see happen (or even discussed).

Neo-conservativism and neo-liberalism have been presented in recent years as steps toward formulating a new pragmatic politics, but neither camp in fact represents much of anything other than the shifting of warm bodies from the vaguely left to the vaguely right. The only real critiques of the status quo with any bite have been those of groups so far outside of the mainstream that they never get favorable mention in the mass media, i.e. the far left and far right.

As mortal enemies, the individuals and small groups that make up these camps generally want nothing to do with each other, preferring to characterize each other as "fascists" or "commies." Yet, ironically, the worldviews of the far left and far right have more in common than either usually cares to admit. At their worst, many proponents of both camps share a fondness for sweeping solutions that all too easily slide into totalitarianism. At their best, however, they each hit political nails on the head more often than those in the center. If a new political perspective is to emerge, it will likely incorporate the strengths and insights of both of these camps rather than hover around the center. The following observations are offered as a small step towards understanding what those insights may be.

* * *

Conventional wisdom has it that the pluralist nature of America (and of Western democracies in general) serves as a safeguard against one group gaining too much power over the whole of society. Thus the private sector balances the public sector, labor balances management, and the South balances the North, etc. In the governmental realm, sometimes the Republicans win and sometimes the Democrats, but neither wins all the time, while the influence of Congress itself is offset by the Executive and Judicial branches. This is a comforting and admirable enough formulation; whether it actually matches reality or prevents the formation of powerful elites is another matter.

If each of us is born with a motto inscribed in our genes, I suspect that mine must be "Fools rush in where angels fear to tread." As a cartoonist as well as a writer, I guess I qualify as some kind of a professional Fool, and my penchant for blithely striding into the middle of ideological battlefields just as the excrement hits the ventilation system never fails to amaze even me. The following exercise in hot-potato juggling is more of the same. It first appeared earlier this year in a special "Beyond Left/Right" issue of Critique: A Journal of Conspiracies and Metaphysics, *#27 (single copy: $6, 3-issue subscription: $15, from P. O. Box 11368, Santa Rosa, CA 95406). I offer it to a wider audience in the hopes that it will inspire further dialog and discussion.*
—Jay Kinney

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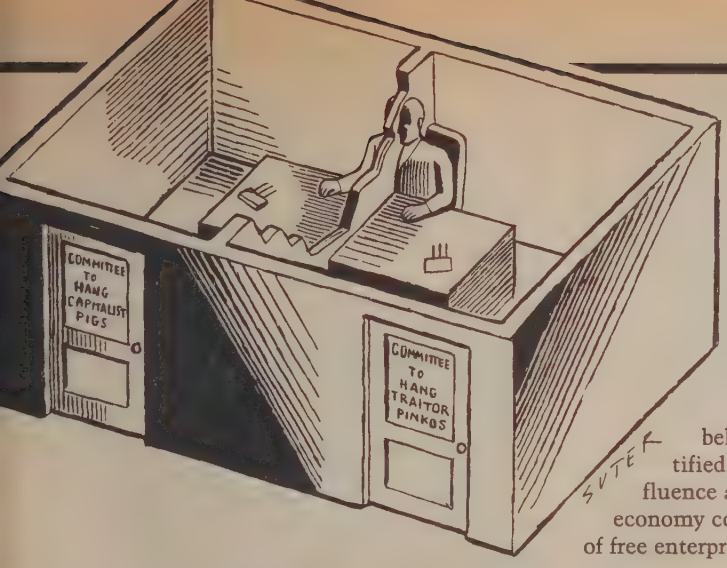


Both the far left and far right dispute that America's pluralism has, in fact, prevented small elites from acquiring and manipulating economic and political power. These elites — labeled the *ruling class* in the case of left analyses and *international bankers* and *one-worlders* in the case of right analyses — are identified as individuals and corporate entities that largely operate outside of the arena of public decision-making. In focusing on these elites both worldviews challenge the reigning myths of Western democracies and risk being labelled as "conspiracy theories."

In their most extreme formulations, the analyses of the far left and right may indeed become conspiracy theories and exhibit the defects of paranoia, scapegoating, and guilt-by-association commonly associated with that label. However, the most sophisticated analyses of both sides are worth serious consideration and should not be ignored. The following are some of their points in common as well as their areas of greatest disagreement.

Both left and right analyses describe the present economic order as "monopoly capitalism" though some other terms are also used (on the left: *late capitalism, imperialism;* on the right: *supercapitalism, finance capitalism).* Both analyses contrast monopoly capitalism with an earlier system of free enterprise capitalism, and see monopoly capitalism as having overtaken free enterprise.

The left's analysis views this situation as the result of the evolving logic of capitalism itself, wherein large companies consume smaller ones, national corporations become multinational in the search for both new markets and cheaper labor, and capitalism becomes integrated on an international scale. In other words, for the left, the monopolization of capital is not necessarily the result of a sneaky plot by some backroom elite; rather, the system of capitalism produces monopolies and elites as natural byproducts of its own evolution.

By contrast, the right's analysis sees monopoly capitalism as having usurped free enterprise through a combination of government controls (manipulated by "insiders"), the conniving of international financiers and internationalists, and the drowning of real capital in a sea of debt and paper-based money. The right usually presumes that if the elite conspirators behind this usurpation were identified on a mass scale and their influence and control destroyed, the U.S. economy could then be returned to a system of free enterprise.

Significantly, both analyses are primarily talking about the same phenomenon: the means by which the leadership of the American ruling elite have attempted to "make the system work." Crucial institutions for arriving at an informal consensus among this leadership, such as the Council on Foreign Relations, have come under fire from both the left and right for largely identical reasons: they are the apparatus for maintaining the status quo regardless of what party is in power or who is elected President. Because the largest (and most influential) American corporations are now multinationals with both markets and workers all over the world, they have a vested interest in expediting international economic cooperation and coordination. Since this coordination is characterized by the intertwining of U.S. corporate and government policy with their counterparts in dozens of countries (the much-vaunted "interdependence" of the modern era) it can be validly labeled as both imperialist (by the left) and one-world internationalist (by the right).

Still, despite their shared perception of this phenomenon, each camp has its blind spots. In its emphasis on capitalism as a system (and on capitalists as a class), the left tends to skip over how the realms of international banking and world monetary policy provide constant opportunities for the amassing of fortunes and powers independent of any actual productive enterprises. Since international banker is a catch-phrase of the right, no self-respecting leftist is going to be caught dead investigating what reality may lurk behind the phrase.[1] Also often overlooked by some leftists is the actual integration of "communist" economies into the existing world economic order. Those who don't overlook this tend to write such countries off as "state capitalist."

On the other hand, because the right's analysis maintains an idealized system of free enterprise as its touchstone, it tends to deny the possible existence of opposing class interests in conflict. ►

It also ignores the negative effects of turning all human necessities and desires into commodities hawked in what the Situationists have called "the Spectacle," and the complicity of capitalism in the destruction of earlier forms of community.

It is in the search for solutions that both camps are most polarized by their own idealism. For instance, the classic left analysis sees no hope of salvaging capitalism, especially not a free enterprise version, viewing it as being in chronic crisis due to internal contradictions that can only be resolved through instituting socialism/communism.

In mirror-like fashion, the classic right analysis sees no hope for socialism/communism, viewing it as tyrannical and stagnant due to bureaucratic waste, power-monopolizing elites, lack of freedom and incentive, and assuming that the only way out for countries under its yoke is through a return to market-driven free enterprise.

Because the left is driven by a vision of a utopian future that has never materialized, and the right is driven by a romanticized concept of a past that never was, both analyses cancel each other out. According to each, the "solution" of the other is impossible and/or illusory. Since each side is defending an ideal system that doesn't exist in a pure state in the "real world," but could supposedly exist if only the other system weren't screwing things up, both sides end up talking past each other as a matter of course.

However, there are parts of both the left and the right that begin to depart from this stalemate. This departure has been most pronounced in Europe, where the political polarities have always been more defined to begin with.

For instance, the most innovative segments of the far left (usually identified with anarchism or "anti-authoritarianism" or *autonomia*) tend to identify the State as the root of most social repression, and disown any political or economic system that posits a strong role for government. These segments often call for the free association of workers' councils or the autonomous organization of cooperatives or similar utopian formulations as alternatives to a centralized political economy. Then again they often decline to call for any specific goal or reorganization ahead of the fact, leaving open the question of what might be ahead. In any event, they invariably denounce the governments of both the Western and the Eastern blocs as enemies of their respective citizens.

This last tendency is paralleled in some respects by the critique offered by the so-called French New Right, identified most often with GRECE — *Groupement de recherche et d'etude pour une civilisation européenne* (research and study group for a European civilization). GRECE's leading thinkers, such as Alain de Benoist and Guillaume Faye, call for a Europe united in its independence from both "the West" (i.e. the American way of life, including consumerism, chronic mobility, and a passive depoliticized populace held in thrall to the mass media) and "the East" (i.e. the Soviet system with its party bureaucracy, police surveillance, and political repression). The Europe they champion in opposition to the Superpowers is a Europe of specific peoples whose individual cultures and heritages are fast disappearing beneath the tidal wave of Atlanticist universalism. The appeal of this position must be obvious even to Americans, many of whom feel the same repugnance in discovering that London is now overrun with Pizza Huts and that a giant Disney World is under construction outside Paris.[2]

In defending European nations and peoples against cultural penetration, GRECE's position resembles that of defenders of indigenous peoples in the "Fourth World." Indeed, strange about-faces can occur when former colonizers find themselves becoming the new colonies. When this is combined with an expanding concern for the environment and an interest in alternative spiritualities, one finds the French New Right sharing much common ground with those other European renegades, the Greens.

Of course, despite their disavowals of being beyond the polarized politics of the past (both GRECE and the Greens announce themselves as "Neither Left nor Right"), they still have the reflexes of their ancestors. Thus, any interest shown by the New Right in establishing dialog with the Greens is usually written off as an attempt at infiltration and *entryism*.

Recently, scattered reports from Europe have noted the development of a "Third Position" of former leftists and rightists which has, apparently, been evolving for nearly ten years or longer. Information on this movement has been extremely scanty: an article by Martin Lee in the May, 1987 *Mother Jones* directly linked it with neo-fascist terrorists such as the Armed Revolutionary Nuclei (NAR), and reported slogans such as "Hitler and Mao united in struggle," which suggest a "worst of both worlds" approach. While this spectre of totalitarian berserkers is dramatically horrific, it is far more likely that any real new political movement, either there or here, will primarily draw upon people with neither skeletons to hide in their closet nor the desire to create new ones.

* * *

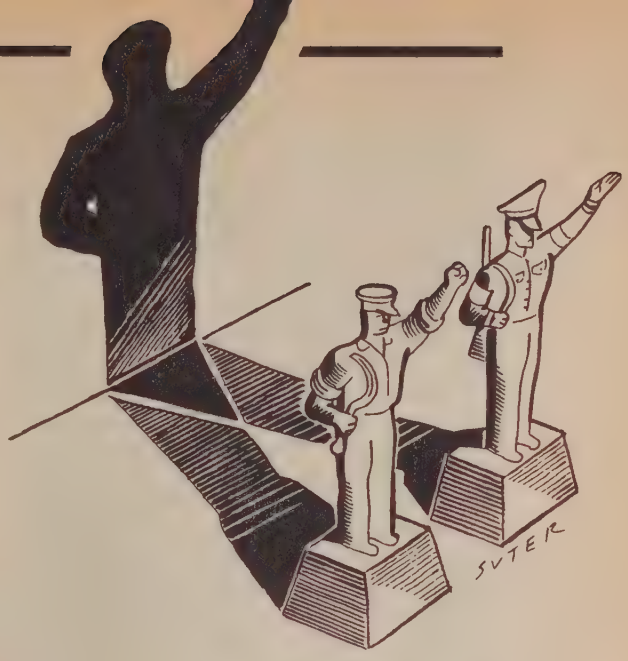
The prospects for political convergence in the U.S. are considerably different from those in Europe. For one thing, the domestic far right tends to identify itself heavily with the same American Founding Fathers that the European far right cites as the original source of much of

America's leveling aggressiveness. While GRECE and those within its orbit (including the English political journal, *The Scorpion*)[3] criticize the American "faith in limitless material progress" and assembly-line individualism, the ultra-right in the U.S. is practically synonymous with an "America First" ideology. This makes for some curious contradictions.

For instance, despite the fact that their analysis says that a group of insiders has cooked up the East-West conflict between the U.S. and the U.S.S.R. as a phony rivalry to distract us while the conspirators actually pull the strings, lend money to both, and make big bucks behind the scenes, the far right's reflexive demeanor is to take the conflict at face value and opt for an ultra-patriotic response. It is only with a few far right organizations such as the Liberty Lobby that exhibit an isolationist distaste for foreign entanglements and foreign wars that one can begin to see a stance that may give them common cause with the non-interventionist left.

The question of patriotism and nationalism enters here and may be the area where the political extremes are farthest apart. Building on the communist principle of *proletarian internationalism* (i.e. that the working people of various countries have more in common with each other as a class than they do with the capitalists and governments of their own countries) the far left has usually considered nationalistic patriotism to be a reactionary delusion. The far right, on the other hand, has generally considered the U.S. to be the greatest country in the world, one uniquely blessed with freedoms and opportunities not found elsewhere, and has consequently feared any kind of internationalism that could compromise national sovereignty or usher in a coercive world government from which there would be no escape.

Nevertheless there are numerous exceptions that the extremes entertain within these stances. It turns out that many on the far left do support nationalistic patriotism, in other countries at least (in the form of so-called national liberation movements and/or the struggles of indigenous peoples), while many on the far right practice a kind of internationalism in forging links with anti-communists in other countries and, ironically, don't have much fondness for the actual U.S. government in Washington, D.C. This is not to say that the far right and left are actually closer than they realize on this question — such is hardly the case: the respective political camps that the U.S. extremes champion in places such as Central America are locked in life-and-death struggles with each other and the piles of bodies keep growing daily. My point is simply that terms such as patriotism and internationalism are not the monolithic catchphrases that they are often cast as.



Speaking of such catchphrases, mention should be made of the troubles that arise with the use of certain words. A common complaint about the far right's use of the terms "international bankers" or "internationalists" or "insiders" is that they are code words for Jews and indicate an anti-semitic bias. While this is undoubtedly true in some cases, it is simply not true in many others. Gary Allen and Larry Abraham's enduring bestseller, *None Dare Call it Conspiracy* (recently revised by Abraham and republished as *Call it Conspiracy*), has much to say about bankers and the super-rich, but is careful to disengage itself and its analysis from anti-semitism. Allen and Abraham note: "Anti-Semites have played into the hands of the conspiracy by trying to portray the entire conspiracy as Jewish. Nothing could be farther from the truth. The traditionally Anglo-Saxon J.P. Morgan and Rockefeller international banking institutions have played a key role in the conspiracy."[4] Other far-right classics such as Dan Smoot's *The Invisible Government* and W. Cleon Skousen's *The Naked Capitalist* also present the far right's analysis without resorting to anti-semitism. Skousen emphasizes: "No student of the global conspiracy should fall for the Hitlerian doctrine that the root of all evil is a super 'Jewish conspiracy.' . . . In studying the global conspiracy it is important to keep in mind that it was not any particular race or religion but the 'passion for money and power' which has drawn the tycoons of world finance into a tightly-knit, mutual-aid society."[5]

While some writers do indulge in a reductionism that says: Bankers = Jews = Zionists = Communists, the simple truth is that the bulk of the far right's assertions about manipulative elites are independent of anti-semitic intent. Moreover,

the unfortunate fact that some far-right theorists *are* anti-semitic does not necessarily negate *all* of their research. To be sure, one must exercise extreme caution when choosing what to take seriously from an extreme source, but this is a wise policy to follow in confronting either end of the political spectrum.

Perhaps the biggest roadblock to getting a handle on the ideas of the political extremes is the taboos surrounding their literature, especially if one is approaching the publications of the opposite camp. "Commies," as a matter of course, are not going to read the Liberty Lobby's newspaper, *The Spotlight*, or the revisionists' *The Journal of Historical Review*. Similarly, few rightists are going to regularly peruse the anarchist tabloid *Open Road*, or the *Situationist International Anthology*. If they were to check them out they'd likely discover that both sides do have some valid points in their critiques and that — at their best — there may be more intelligence at work in the opposition than previously suspected.

Consider the following quote: ". . . Production has, for the past fifty years or so, been outstripping the ability of our society to absorb it, and this trend grows at an accelerating rate. The reasons are basically two: the continuing advancement in production techniques of everything in the material world, and the constricting effect of a money system based on usury, compound interest and inflation — a money system which is designed not for the distribution of goods but for the profit of those who manipulate it. Thus, the balance between production and consumption must be redressed every generation or so by war, which not only consumes vast amounts of production but also removes men from the labor market and leaves a void of destruction as its aftermath which requires more production to repair. This describes the horror of our situation . . . The big picture is this. We are all ensnared by the tentacles of a system of social control, operating at all levels of society, which demands the blood sacrifice of millions of the cream of our youth every generation in bloody aggression to maintain prosperity."[6]

A quote from Lenin or Rosa Luxemburg discussing the genesis of Imperialist wars in this century? No, curiously enough, this analysis springs from the pen of Willis Carto, founder of both the far-right Liberty Lobby and the revisionist Institute for Historical Review.

Of course, to discover coherent points of intelligence in the literature of the previously despised is to surrender some small part of one's own dogmatic purity, which is often the primary solace of the isolated extremist. What this means in practical terms is that though a political convergence may be on the horizon (most likely with the label "populist," I'll wager) it will probably not involve leftists *as leftists* sitting down to cooperate with rightists *as rightists*. Rather it will probably be birthed by people fed up with both ideologies who are eager to scavenge for truths wherever they may be found and who are not scared off by obsolete stereotypes and *ad hominem* attacks.

* * *

Looking beyond the developments of the past and present and projecting into the future, what are some areas of concern where those coming from both Left and Right backgrounds are likely to come together? The following short list merely skims the surface:

Regionalism.
(Fourth World/indigenous autonomy)
The defense of native peoples and their cultures against encroachments from both multinational corporations and racist governments cuts across political lines.

Community.
(Ethnic Traditions/ recession-fighting cooperation)
The celebration of ethnicity, be it Afro-American or Latvian or Anglo-Saxon, should be something that everyone can support without having to be stigmatized as racist or, conversely, claiming that one's own heritage is superior.

Spirituality.
(Anti-materialism/non-mainstream religion)
Many people share a disgust with the worship of "success" and the acquisition of material goods as the goal of one's life. Outside of the ranks of the fundamentalists (both religious and atheist) who have little tolerance for anyone who doesn't agree with them, large numbers of people have been responding to the spiritual barrenness in their lives by investigating and participating in non-mainstream religions.

Populism.
(Anti-Big Business/ Anti-Banks/new monetary policies)
No one likes to be yanked around by giant structures and bureaucracies, whether private or public, and this goes for the farmer in Iowa who is losing his farm to the bank or the city dweller forced out of her neighborhood by gentrification. As the IRS goes after the underground economy, all sorts of citizens from the flea marketeer to the odd-jobber are going to be mighty pissed as their margin of survival shrinks to nothing.

Health/Environment.
(Alternative medicine/anti-pollution)
Whether they use DMSO or MDMA, increasing numbers of people want the FDA and the AMA to quit breathing down their necks. In recent years, the one place where the far right and the

far left have been likely to meet is at the vitamin counter. And while it may have seemed like the left was the main contingent fighting nuclear energy and pollution in the past, Three Mile Island and Chernobyl have helped drive home the value of a decent environment to everyone.

Foreign Policy.
(Non-interventionist/
Isolationist/revamp Mideast policy)
It has been common for both the far left and the far right to be anti-Zionist; the left because the PLO is explicitly socialist while Israel portrays itself as the watchdog for U.S. interests in the region and is a trading partner with South Africa, and the right because it sees Israel as a drain on the federal budget and an undependable ally with a penchant for dragging the U.S. into cul-de-sacs (e.g. Lebanon, the Iranscam mess, etc.). Both political extremes also question U.S. involvement in other regions especially if shooting wars are likely.

Contemplating the convergence of the far left and right is an intriguing pastime. It can also be a scary one. Nazism in Germany and fascism in Italy can, in part, be seen as examples of swiftly growing movements that drew upon elements of both the left and the right and created new amalgams. However, they also involved the glorification of a corporatist State — a form of submission to an authoritarian Big Brother which seems to be the antithesis of the "don't tread on me" stance of the political extremes in the U.S. If we are to fear fascism arising here, given current trends it seems far more likely that the centrist Establishment itself will quietly usher in an era of pragmatic, technocratic "friendly fascism" (as Bertram Gross termed it in his book of the same name[7]) than that doughty populists will opt for a totalitarian solution. Freedom is the mutually stated goal of both the Far Left and Far Right; if weary veterans of both camps can just reach an agreement regarding freedom from what and freedom to do what, then a true "third way" may develop unlike any seen before. That would be a convergence worth celebrating! ■

Notes

1. A rare exception is Michael Moffitt's book, *The World's Money,* which does cover global banks and their effects. Penny Lernoux's *In Banks We Trust* also treats the topic with some rare leftist savvy.

2. On the other hand, I must admit to feeling far less horror when confronted with a San Francisco overrun with French bakeries, Thai restaurants and Japanese sushi bars. No doubt it is a double standard to view the cultural invasion here as a relief from homogenization but to view it there as a symptom of homogenization. Yet it is worth noting that the appeal of, say, a Szechuan restaurant derives in no small part from its implicit "message" of culture and customs maintained, usually by an extended family who have immigrated en masse. By contrast, a MacDonald's in Frankfurt communicates only the reproduction of a corporate franchise and the attendant images and decor concocted by commercial ad and design agencies.

3. *The Scorpion* is reviewed in "Beyond the Valley of the Ultra-Radicals," below.

4. Gary Allen, *None Dare Call it Conspiracy,* Rossmoor, California, Concord Press, 1971, p. 39.

5. W. Cleon Skousen, *The Naked Capitalist,* Salt Lake City, Utah, Skousen, 1970, p. 8.

6. Willis A. Carto, "Toward History," *The Journal of Historical Review,* Vol. 5, No. 1, Spring, 1984, p. 13.

7. Bertram Gross, *Friendly Fascism,* Boston, Massachusetts, South End Press, 1982.

BEYOND THE VALLEY OF THE ULTRA-RADICALS

The effort to move beyond Left/Right politics may indeed make for some strange bedfellows. I'm not convinced that all of the following folks could stand to be at the same pajama party, but they each have interesting things to say that defy old-fashioned labels. —Jay Kinney

The Scorpion: $15/4 issues from 5353 Dora Street #2, Houston, TX 77005.

This is the only English-language journal that I am aware of that has translated texts by Guillaume Faye, Alain de Benoit, Julius Evola, and other thinkers influential among the European "Third Position" and New Right movements. For this reason alone, it is worth getting. In addition to its value as a resource for hard-to-find texts, however, ***The Scorpion****, under the editorship of Michael Walker, is an extremely well-put-together British journal of discussions about the topics raised by those authors. Issue themes have included Racism, Nihilism, Nationalism, America, the Romantic Vision, and Ecology. If you think that the New Right has no intellectual chops,* ***The Scorpion*** *will set you straight in short order.*

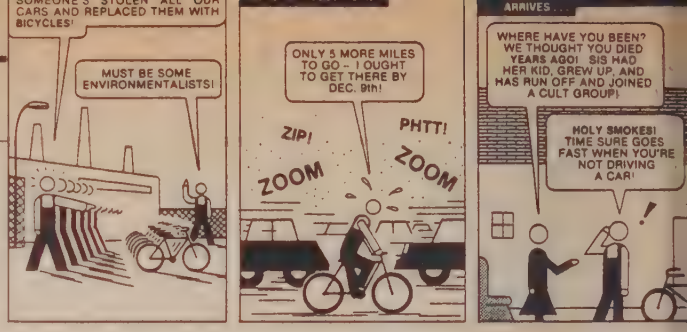
New Options: $25/year (11 issues) from 2005 Massachusetts Avenue NW, lower level, Washington, DC 20036; 202/822-0929.

This monthly newsletter, edited by Mark Satin, is one of the leading American exponents of "beyond Left/Right" politics. Each issue highlights people, books, and groups that Satin sees as helping to break up old dogmas and worldviews with new insights and tactics. A great deal of this activity seems to reside in "Green" and "New Age" circles, especially if they impact on Washington policymakers. There are invariably interesting tidbits — particularly in the active letter column — but Satin affects a breathless writing style that is all too reminiscent of ***USA Today*** *headlines. Trying to build momentum for a self-described "post-liberal" movement is all very well, but* ***New Options*** *would read much better if Satin placed an embargo for a year or two on his use of the words "we" and "us."*

Action Linkage: for information send SASE to 5825 Telegraph Avenue #45, Oakland, CA 94609. Newsletter and informational membership: $30/year.

This organization, originally founded by futurist/economist Robert Theobald, is actively involved in trying to develop calm and clear-headed communication between people from a variety of backgrounds and perspectives. The goal is to respond to global problems on a local scale with solutions that sidestep Left/Right dichotomies. Dialog is encouraged through "many-to-manys," topic-focused publications composed ofparticipating members' letters to each other and to the group [described in detail in "Unhurried Communication," ***WER*** *#57, p. 82]. The emphasis here is on decentralized, pragmatic solutions to the crises and problems that the traditional political ideologies seem incapable of addressing. It is worth checking out Action Linkage if for no other reason than to get a copy of their outstanding "Agreements of the Open Space," which outlines a remarkably sane set of guidelines for maintaining communications with those with whom one disagrees.* ■

—*Semiotext[e]*


SOMEONE'S STOLEN ALL OUR CARS AND REPLACED THEM WITH BICYCLES!
MUST BE SOME ENVIRONMENTALISTS!
ONLY 5 MORE MILES TO GO - I OUGHT TO GET THERE BY DEC. 9th!
ZIP!
PHTT!
ZOOM
ZOOM
ARRIVES...
WHERE HAVE YOU BEEN? WE THOUGHT YOU DIED YEARS AGO! SIS HAD HER KID, GREW UP, AND HAS RUN OFF AND JOINED A CULT GROUP!
HOLY SMOKES! TIME SURE GOES FAST WHEN YOU'RE NOT DRIVING A CAR!

Semiotext[e] USA • Apocalypse Culture

These two fat anthologies gleefully document the mindboggling writings and rantings of America's most determined "outsiders." Drawing upon the same general pool of social nihilists, post-post-punk misanthropes, nonconformist feminists, idiot savants, pissed-off poets, and political extremists, the editors of these two volumes have nevertheless fashioned uniquely different collections of cultural marginalia.

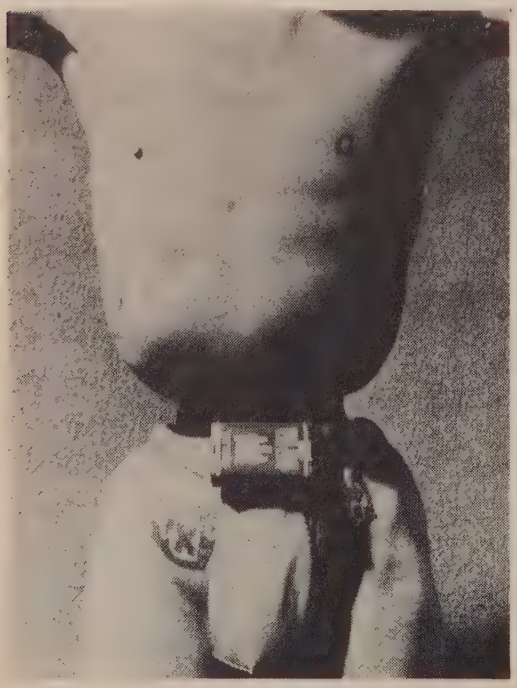
***Semiotext[e] USA**, edited by Jim Fleming and Peter Lamborn Wilson, is a blockbuster special issue of an avant-garde journal originally devoted to translations of impenetrable French semioticians and other overeducated types. However, this volume makes a determined lunge for the grassroots with literally dozens of mocking attacks on normality yanked off of telephone poles, ripped out of fanzines, and clipped out of anarchist rags. There is enough here (356 pages!) to reward many evenings of puzzlement. This is the cream of the crop of antiauthoritarian visions, united more by a shared attitude problem than by a shared program for social change. The last 50 pages of the book are devoted to hundreds of free ads for pamphlets, books, cassettes, and magazines published by the contributors and similar ne'er-do-wells. The first printing of this book was an amazing underpriced bargain at $8.95. If they reprint, the price will have to rise.*

***Apocalypse Culture**, edited by Adam Parfrey, describes itself as "a startling, absorbing and exhaustive tour through the nether regions of today's psychotic brainscape." Stops along the way include interviews with an unrepentant necrophile and a mystical self-mutilator, excerpts from the pronouncements of Adolf Hitler, the Red Brigades, as well as anonymous schizophrenics, material on scientific upstarts like Wilhelm Reich and Charles Fort, and an examination of the Masonic symbolism to be found in circumstances of JFK's assassination. The percentage of out-and-out sociopathology is much higher in **Apocalypse Culture** than in **Semiotext[e] USA**, which makes this a less capricious read. Still, by unearthing direct communiques from some of the human race's most unsettling thought-criminals, Parfrey helps broaden our grasp of what people are capable of thinking . . . and doing.*

These are hardly coffee-table books: in fact, these volumes may curdle the cream in your coffee. But, for an unvarnished view of Western civilization in crisis, both anthologies are required reading. —*Jay Kinney*

•

When Piero Manzoni, in 1959, canned his shit and put it on sale, in an art gallery, for its weight in gold; when Chris Burden had himself shot in the arm and crucified to the roof of a Volkswagen (in 1971 and 1974 respectively); when two American performance artists, in separate events, fucked human corpses — how did such activities come to be called art? In fact the case at hand is not unique. Similar movements have occurred occasionally in cultural history when the necessary conditions were in place. Perhaps the most striking parallel is the development, in the Cynic school of Greek philosophy, of a style



14 Inch Waist Belt* (1952).** —Apocalypse Culture***

Pranks!

***Pranks!** is a hilarious book that had me laughing out loud. At the same time it is a manual of cultural subversion that administers a hot-foot to the archetypes of authority and robotic propriety. In a series of over 30 interviews, counterculture figures, performing artists, filmmakers, and other assorted provocateurs describe their favorite pranks and the philosophies that motivated them.*

*Media manipulator Joey Scaggs tells us how he fooled the **New York Times** and the television networks with his Cathouse for Dogs ("Get your dog a little tail!"), Gypsies Against Stereotypical Propaganda ("Rename the gypsy moth!"), and other hoaxes. Paul Krassner recounts the creation of **The Realist** and the Yippies. Dead Kennedys lead singer Jello Biafra discusses his campaign for mayor of San Francisco, musician-artist-writer Boyd Rice tells how he presented a sheep's head to Betty Ford (impulsively, believe it or not), and Abbie Hoffman describes how he ran a pig for president. From psychedelic revolutionary Tim Leary to raunch-film director John Waters (**Pink Flamingos**, **Hairspray**) to the Velvet Underground's John Cale, the lineup of interviewees is truly remarkable.*

*But **Pranks!** isn't just a recounting of naughty anecdotes. Many of those interviewed, such as Earth First! environmentalist Mike Roselle, perform their pranks as the most direct way of getting serious points across. And thanks to the intellectual style of interviewers Andrea Juno and V. Vale, **Pranks!** comes off as a statement of avant-garde philosophy — a kind of cosmic wake-up call from an extended underground of surrealist artists.*

—*Ted Schultz*

•

When you use the phone don't ever waste a wrong number. For instance, if someone calls up and says, "Is

of "performance philosophy" that parallels the gestures of performance art in many respects. If this material is approached with sympathy and with a broad enough cultural perspective it will reveal its inner seriousness and meaning.

•

It may come as a surprise to learn that a few artists are now producing work which finds itself classified as a thought crime, punishable by expulsion into a Siberia of non-distribution, and in a few cases by litigation and prison. *Pure* magazine, from Chicago, a xeroxed vehicle which extols child torture, murder, and extreme misogyny, tweaked too many civic-minded noses, and its editor, Peter Sotos, was tailed for nine months until he was nailed with charges of reproducing child pornography (one quite disputable xerox) and possession of child pornography (one magazine — *Incest IV*). Sotos' case is the first under a new Illinois law, enacted under influence of the Meese Commission Report, an example of First Amendment revisionism *par excellence.* It is apparent that Sotos is being tried not for his interest in violence, but his unhypocritical adulation of it outside mass media's "safe" venues of pornographic violence in the average comic book, action show, and crime novel.

■

BERTRAND RUSSELL
From a Speech (1930)
The most intelligent individuals on the average breed least, and do not breed enough to keep their numbers constant. Unless new incentives are discovered to induce them to breed they will soon not be sufficiently numerous to supply the intelligence needed for maintaining a highly technical and elaborate system. Further, we must expect, at any rate, for the next hundred years, that each generation will be congenitally stupider than its predecessor, and we shall gradually become incapable of wielding the science we already have. —*Apocalypse Culture*

Semiotext[e] USA
Jim Fleming and Peter Lamborn Wilson, Editors
1987; 352 pp.
$8.95
($9.95 postpaid) from:
Autonomedia
P. O. Box 568
Brooklyn, NY 11211
718/387-6471
or Whole Earth Access

Apocalypse Culture
Adam Parfrey, Editor
1987; 277 pp.
$9.95
($10.95 postpaid) from:
Amok Press
P. O. Box 51
Cooper Station
New York, NY 10276
or Whole Earth Access

Jack there?" don't say, "I'm sorry, you have the wrong number." Say, "Hang on, I'll see. Who's calling?" Then wait a second. "I'm sorry, Jack doesn't want to talk to you. Jack is still very angry, and he doesn't want to discuss it."

■

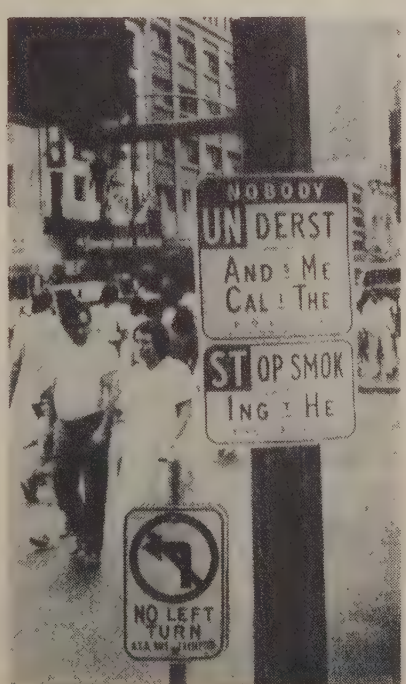
Around 1961 I had inquiries for my biography from *Who's Who in America* and *Who's Who in American Art.* So I was listed in both of them, but the biographies were different. It seemed to me that a person should be able to control his own autobiography. Secondly, this was an experiment in how far you could push things — whether anybody would ever notice.

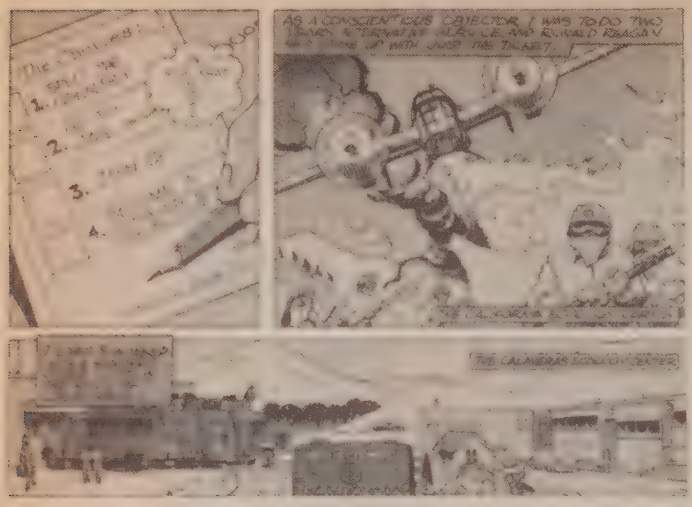
■

Andrea Juno: Can you give an example of some other fantasies?
Paul Krassner: I printed an article about television as a cause of disease, citing experiments in which rats were subjected to lots of TV watching. It was picked up by the *Saturday Review.*

AJ: But a book came out saying there actually may be such a correlation —
PK: I have discovered that there is such a thing as satirical prophecy — it's almost like voodoo comedy. I did a show in 1963 at the Village Gate where I said that Tiny Tim would get married on *The Johnny Carson Show.* That was a joke based on the cultural trend of exploitation of oddities. In 1969 that *happened* — he actually got married on *The Johnny Carson Show.* I was talking to Baba Ram Dass about this and he said, "Well, it's astral humor. The connections are all out there in space — it's just a matter of plucking them." I like that metaphor.

Pranks!
Andrea Juno and V. Vale
1987; 239 pp.
$14.99
($17 postpaid) from:
Re/Search Publications
20 Romolo #B
San Francisco, CA 94133
415/362-1465
or Whole Earth Access





Real War Stories

*The potential of comic books to reach teenagers, especially boys, is considerable. A Philadelphia-based anti-draft group, The Central Committee for Conscientious Objectors, is attempting to exploit this potential as an organizing tool with the publication of **Real War Stories**.*

Real War Stories
Central Committee for Conscientious Objectors
1987; 50 pp.
$2
($2.25 postpaid) from:
Eclipse Comics
P. O. Box 1099
Forestville, CA 95436
707/887-1521

*This is a collection of six true stories of the real military — not the glorious macho fantasy portrayed in propaganda films like **Top Gun**, but the grim reality of military service — oppression, war, humiliation, and death. Vietnam and post-Vietnam veterans relate their experiences (and nearly ruined lives) in sharp contrast to the high-budget PR of military recruiters and the media.*

This comic has the potential to convince a lot of teenagers of what really is in store for them in the military, and is one of the only counters to the ever-increasing din of pro-war and pro-draft messages being aimed at 18-year-olds. Included is a page listing resources available to those who want to look at the alternatives to enlistment or the draft. A pile of these comics distributed at a high school (perhaps during a "Career Day"-type event) could provide some of the most important education they can get at school. —James D. Tedford

The Making of the Atomic Bomb

A hard book, a humbling book, a complex book telling a complicated story, and removing forever the pleasures of hindsight. Worth every page.

Rhodes is patient, lucid, and unflinching as he details 60 years of scientific and political history leading to the bomb. At every step he is as interested in how the bomb came to be used as in its origins in physics, and he is scrupulously fair. No easy answers, no simplistic judgements, no excuses or apologies. He weaves the final anguish of Hiroshima into a picture already full of Dresden, the Holocaust, kamikaze attacks, mustard gas, firebombing, and pogroms; at every turn he is careful to show the reader the minds of his principals, their fears and hopes, their reservations and mistakes. When Robert Oppenheimer, quoting Secretary of War Henry Stimson, says, "As far as degradation went, we had had it," there is no pleasure or smugness in it for the reader. There is instead a pervasive sadness, and humility, and deep respect for thoughful men and women who faced unbearable decisions. —Sallie Tisdale

•

I remember telling Robert Oppenheimer that we were going to look for [ionization pulses from fission] and he said, "That's impossible" and gave a lot of theoretical reasons why fission couldn't really happen. When I invited him over to look at the oscilloscope later, when we saw the big pulses, I would say that in less than fifteen minutes Robert had decided that this was indeed a real effect and . . . he had decided that some neutrons would probably boil off in the reaction, and that you could make bombs and generate power, all inside of a few minutes. . . . It was amazing to see how rapidly his mind worked, and he came to the right conclusions.

[—Luis W. Alvarez]

X-ray motion picture frames of implosion experiment. Note compression of core in final frames.

•

One of Oppenheimer's students, the American theoretical physicist Philip Morrison, recalls that "when fission was discovered, within perhaps a week there was on the blackboard in Robert Oppenheimer's office a drawing — a very bad, an execrable drawing — of a bomb."

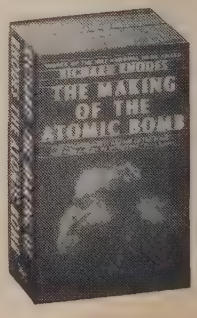
■

The other way the belligerents could escalate was to enlarge the range of permissible victims their death technologies might destroy. Civilians had the misfortune to be the only victims left available. . . .

Extend war by attrition to include civilians behind the lines and war becomes total. With improving technology so could death-making be. The bombing of Hamburg marked a significant step in the evolution of death technology itself, massed bombers deliberately churning conflagration. . . .

The British and the Americans would be enraged to learn of Japanese brutality and Nazi torture, of the Bataan Death March and the fathomless horror of the death camps. By a reflex so mindlessly unimaginative it may be merely mammalian, the bombing of distant cities, out of sight and sound and smell, was generally approved, although neither the United States nor Great Britain admitted publicly that it deliberately bombed civilians. In Churchill's phrase, the enemy was to be "de-housed."

The Making of the Atomic Bomb
Richard Rhodes
1988; 886 pp.
$12.95
($14.95 postpaid) from:
Simon and Schuster
1230 Avenue of the Americas
New York, NY 10020
201/767-5937
or Whole Earth Access



WORLD BEAT:

A BRIEF GUIDE

BY JONATHAN E.

Former production liaison of the Whole Earth Catalog, *and occasional* WER *proofreader, Jonathan E. is known around these offices as a professional DJ and self-professed music junkie. He once admitted to me that if he ends a day without hearing unfamiliar tunes, he begins to twitch. From his unrivaled library of ethnic records, he's pulled this representative sample of global village music.*
—Kevin Kelly

In Lesotho, the landlocked country surrounded by South Africa, a local band called Tanea-Matsekha plays music that the rest of the world listens to — the band's members were involved with Paul Simon on the "Graceland" album. Here they play music for a traditional dance called "Mohobelo," using drums made from tin barrels and bottle-cap percussion instruments. Photo by Don Edkins.

RECORDED MUSIC is cultural communication: communication across town, across oceans, and across time. The creation of rock'n' roll was a synergism of cultures, and ever since it has borrowed freely from whatever sources have had the necessary musical sparks. In 1984 the term World Beat came into use to describe the influences of music from around the world on contemporary rock. More importantly, it also included original pop music from other cultures. At first this meant mostly sub-Saharan African pop, but now more styles from different cultures, such as bhangra from the Pakistanis

in England and rai from Algeria, are surfacing. There is also a lot of musical excavation into bygone styles, such as Afro-Cuban jazz of the forties and fifties, going on.

Traditional musical styles from many cultures have long been available through the ethnographic recordings of companies such as Folkways and Lyrichord, but modern popular styles have not been so readily available. This is due to the economic facts of life in a marketplace. Recorded music is just like any other product in that it follows certain trade routes, and must fulfill enough customers' needs to provide entrepreneurs with a reasonable return on their investment. The customers in this case are, firstly, expatriates who want to hear music from home and later, domestic fans whose musical curiosity has been stimulated both by contact with the immigrants and by exploring musicians and press coverage of those explorations. Both the trade routes and expatriate customers tend to follow patterns established during colonial times. Thus many African records by musicians from Zaire, Senegal, and the Cameroons can be found in Paris. There is also a greater availability of Caribbean music from Martinique and Guadeloupe. In England, you'll find more music from Nigeria, Ghana, and South Africa, as well as vast amounts of reggae. Modern paths of migration are also important. Many West Indians and other Caribbean people have immigrated to the east coast of the U.S., so Brooklyn and Miami have a large number of record companies specializing in music from Haiti, Trinidad, Jamaica, and Cuba.

The musical influences have been a little more free-ranging. African and American musical styles have constantly criss-crossed the Atlantic influencing each other. In the forties, Congolese music imitated Martiniquan *biquines* and Cuban *sones*, the "Rhumba Connection." In the sixties, Nigerian and Ghanaian musicians took the horns and guitars of American soul for their own. Of course, all black American music is African-based (read "Hear That Long Snake Moan," *WER* #54 & #55). Currently, the *zouk* music of Guadeloupe is sweeping France and affecting the African records being produced there. Similarly, reggae, with its African roots, has gone from Jamaica to England, back to Africa, and is currently strong in the Northeastern U.S. where it has had strong influence on urban street music styles. Soca is incorporating rap and in turn has recently made an appearance in the U.S. pop charts, and by now everybody has heard of "Graceland."

Since 1984, recorded music from around the world has been more widely distributed in the U.S. than ever before. Imported records were the medium for a while, but in the past year things have changed. Now more domestic record labels are releasing pop music from far away. The Shanachie label even has a series it calls "World Beat/Ethno Pop," but other independent labels such as Rounder, Carthage, CelluIOid, and Mango are also releasing an increasing number of foreign recordings domestically. Even major labels are making a few moves into the field. For those of you interested in pursuing this topic to its logical conclusion, i.e. actually listening to some music, I have selected some records. Be aware that this is an extremely limited selection and that there are literally thousands of other worthwhile records out there. The main criteria employed here were availability, diversity, and potentially classic status. All these records should be findable with a minimum of hassle; they generally outline the field (this leads to a fairly high representation of compilations at the expense of some individual artists, and we're still missing some genres). They are all Class A, premium grade examples of the vinyl art. □

WORLD

Compilations

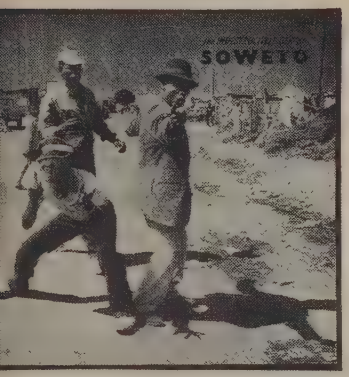
Music and Rhythm: A Benefit Double LP for A World of Music, Arts and Dance *($15 postpaid from Express Music.)*

A crystallization of much that came before and a fountainhead for much that came after, this 1982 release is more worldly than most. There are Burundi drums, Dagbamba drums from Ghana, Nigerian pop, Trinidadian soca, English reggae, Balinese Ketjak chanting, Qawwal singing from Pakistan, kora music from Senegambia, folk Magododo xylophone from Malawi, and a whole slew of tracks from various Western and Northern musicians of the rock and avant-garde variety incorporating musical elements from around the world. For all the diversity the whole hangs together well and has withstood the test of time. The sleeve notes are brief but informative. One word of caution: for a while this was condensed down to a single LP; the double is much more satisfying.

Dance! Cadence! *(Globestyle ORB 002. $14 postpaid from Down Home Music.)*

This album features music from the islands of Martinique and Guadeloupe. It is called cadence, although a new development of it that is drawing great attention is called zouk. Cadence grafts West African rhythms onto the quadrilles and mazurkas of eighteenth-century France. The result is a driving, exciting

usic with lots of horns, percussion, nky guitars, and choral vocals. There e eight selections on this album with lot of variety. As with all Globestyle eleases, the sleeve notes are excellent, nd the whole production and packaging e superior.

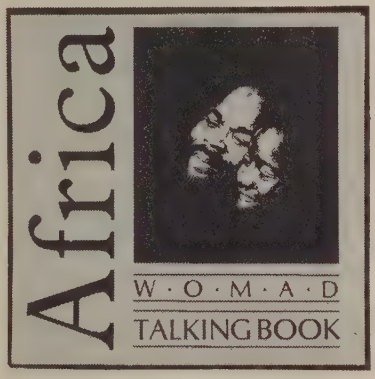


The Indestructible Beat of Soweto *Shanachie 43033. $7.75 postpaid from hanachie.)*

he Mbaqanga beat of the South Afri- an townships is one of the musical onders of the world. Along with Chi- ago blues and Jamaican reggae it is oquent testimony to the human spirit's ility to endure under conditions of eat hardship. The music is a lively and ash collision of traditional Zulu and otho tribal music with fifties Afro- merican styles. This album is drawn om the early eighties and features omping drums, throbbing bass, gruff cals, accordions, guitars, and key- ards. Every cut is a winner. The eeve comes complete with translation the lyrics which show the variety of eryday street life in Soweto, from gotiations over bride price to street ime to veiled political statements. ne boycott actions against South Af- a may make some of you stay clear this, but I feel that cultural com- unication at this level can do nothing t strengthen understanding of the pression occurring in South Africa d hasten the day when it becomes ania. I sure hope the musicians are tting some royalties though.

Go South *(Meadowlark 402. $7.75 postpaid from Shanachie.)*

A concise but tasty selection of modern African styles with a side trip to a funky Trinidadian/USA collaboration holding fast to a Nigerian ambiance. This is a sampler for the important Earthworks label of England, licensed for the American market by Shanachie's subsidiary label. As such, it emphasizes the English colonial trade routes with music from Lesotho, Zimbabwe, Nigeria, and Kenya. The Francophones are represented by a soukous cut from Zairean artist Souzy Kasseya. Good sleeve notes that are full of information on modern African music and trends, with a useful glossary of musical styles, even those not represented on the record.



WOMAD Talking Book, Volume 2: An Introduction To Africa *(WOMAD 003. $14 postpaid from Down Home Music.)*

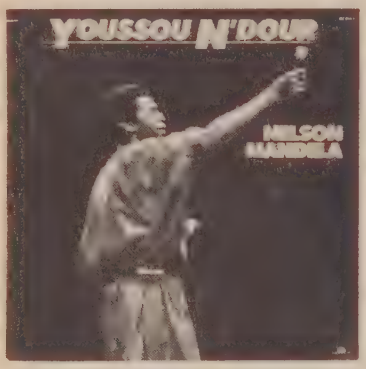
The ongoing project of the World Of Music, Arts and Dance Foundation is the Talking Book Series. Each volume gives a glimpse of the musical treasury of a continent through music and accompanying words in a magazine format extending beyond mere personality profiles to historical accounts, instruction in musical instrument making (in this case, a talking drum), and textile designs. There are even suppliers listed, as well as further reading suggested. The music on this volume is well integrated and ranges from all corners of the continent and beyond to the important cross-cultural connections of Europe, from folk singing and drumming to electronic fusion. If I had to pick one disc to last me my days, this might be it; surely if the Talking Book sleeve was included. Other volumes in the series so far are a worldwide introduction (that one is spread thin but is still impressive), Europe, and Asia. Forthcoming volumes include the music of the Americas, the Far East, and the Pacific.

Recordings From Individual Artists

Black Stalin — *I Time* *(B's Records 061. $10.10 postpaid from Original Music.)*

Black Stalin is one of the kings of soca, which is an update of calypso. Whilst much of the genre consists of little more than boasting party tunes, the best maintain the high lyrical standards of political correctness allied with a certain wit. The sound is a high-tech fusion of electronic drums, conga, driving horns, guitars, and bass. This album has tunes dealing with South Africa, the necessity of remembering how to make steel drums (known as *pan*, and a little ironic here as they are not prominent

on this album and may even all be synthesized), world peace, and Stalin's secrets for staying alive in this world of robbers (stay strong, high, and dread).



Youssou N'Dour — *Nelson Mandela*
(Polydor 831 294-1. $12 postpaid from Down Home Music.)

Crossing the Atlantic Ocean back to Senegal, we come to this record in a style known as Mbalax. There's a strong Arabic flavor here, particularly in the vocals. The prominent percussion on a variety of talking drums is pure West African, however, while the horns are American r'n'b. The purists had some trouble with this album, especially with its cover of the Spinners' "Rubberband Man," but to my ears this was an effective illustration of the shared features of American and African musics.

Ofra Haza — *Yemenite Songs*
(Shanachie. $8.20 postpaid from Shanachie.)

Going east out of Africa, we come to this record of Israeli pop songs. Ofra Haza is a major star in Israel, and one of the songs on this album was even something of a dance club hit in the U.S., although in a drastically remixed form. This album contains a rich selection of Yemenite poems set to a complex music dominated by a variety of unusual percussion, strings, and reeds, all held together by Ofra's vibrant and expressive voice soaring high and low, always in magnificent control.

Fela Kuti — *Zombie* *(CellulOid 6116. $7.75 postpaid from Shanachie.)*

Fela is important to World Beat both because of his political stance and his

WORLD BEAT:

Access:

The record business is plagued by items being out of stock, price increases, and other difficulties endemic to low-margin businesses (these recordings are not high-grossing Hollywood items). Part of the fun is the hunt. Get hunting. Here are some clues. Express Music claims to be able to get any record in print in the U.S. Shanachie has a healthy selection of African records in their mail-order catalog. Down Home, Roundup, and Original all have a wide range of records from around the world, and informative catalogs to whet your musical appetite. Carthage and CellulOid make their own releases available via their own mail-order services.

Carthage Records, Inc.: P. O. Box 667, Rocky Hill, NJ 08553; 609/466-9320. Free catalog.

CellulOid Records: 330 Hudson Street, New York, NY 10013; 800/634-5512. Free catalog.

Down Home Music, Inc.: 10341 San Pablo Avenue, El Cerrito, CA 94530; 415/525-1494. $3/year requested for newsletter of new releases.

Express Music: 50 W. 17th Street, New York, NY 10011; 800/233-6357. $6/year for monthly catalog, refundable with first order.

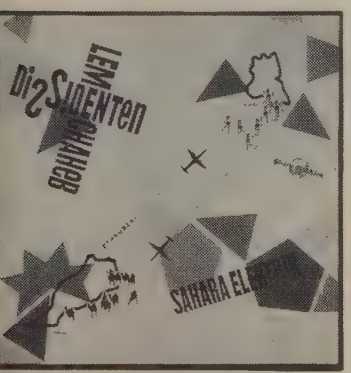
Original Music: R. D. 1, Box 190, Lasher Road, Tivoli, NY 12583; 914/756-2767. Free catalog.

Roundup Records: P. O. Box 154, N. Cambridge, MA 02140. $5/year for The Record Roundup (5 issues).

Shanachie Records: Dalebrook Park, Ho-Ho-Kus, NJ 07423; 201/445-5561. Free catalog and newsletter.

WOMAD Foundation: 3rd Floor, 85 Park Street, Bristol BS1 5JN, England.

malgamation of African and American tyles into one all his own, Afro Beat. 's difficult to pick one album, especially nce CellulOid have rereleased so many, ut this mid-seventies release seems uite representative and has the advan- ge of having three tunes on it instead f the rather common long instrumen- l vamp on one side with the vocal ersion on the other. The music is puls- g and powerful, the familiar horns and ercussion driving it along, with a gen- rous dose of Fela's sax and organ. The ocals concern the necessity of not eing "a zombie" in today's society, specially Nigeria's less-than-democratic ociety. The message is driven home ith gruff military commands and weet female backing vocals.



em Chaheb & Dissidenten — *ahara Elektrik* *(Shanachie. $8.20 ostpaid from Shanachie.)*

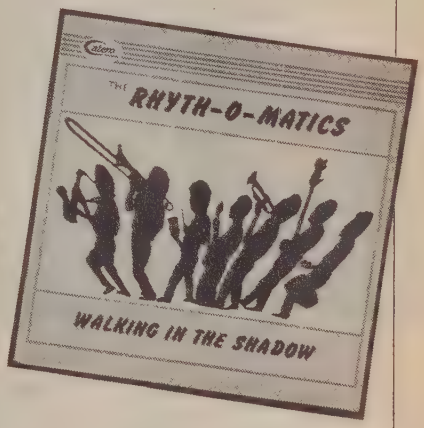
his collaboration between Morocco's em Chaheb and West Berlin's Dissi- enten is a good example of the ideas ehind World Beat. It is a heavily elec- onic meeting between two cultures iat combine to make a whole much ronger than the sum of the parts. All ie compositions were inspired by oroccan tribal music, but they have ie drive of the West (or more accu- tely, the North). As well as the syn- iesizers, there are the vocals, mandolin id percussion of Morocco, all driven ong by the bass and drums in a odern dance sound.

Thomas Mapfumo and The Blacks Unlimited — *Ndangariro* *(Carthage 4414. $10.80 postpaid from Carthage Records.)*

From Zimbabwe, where he is an important political as well as musical figure, Thomas Mapfumo has brought us an electrified version of traditional Shona music. The result is a tingling, energetic, urgent music with chattering guitar, handclaps, and angular rhythms overlaid with gruff call-and-response singing, accented by horns. This is one of the cornerstone albums of World Beat, both because of its early original release and because of the vital music.

The Caribbean Allstars — *Live and Direct* *(Raw Life 1102L. $12.13 postpaid from Down Home Music.)*

The observant among you will have noticed that I have not listed any reggae albums in this baker's dozen. The reason is twofold: one, reggae deserves a survey all of its own, although its consciousness is close to World Beat; two, for the most part access to reggae music is easier than what we have been considering here. Having said that, this Caribbean Allstars album is close to a reggae album. They also have elements of soca and West African musics thrown into the mix, however. Their sound is a well-balanced blend of horns, percussion, stinging lead guitar, throbbing reggae bass, and sweet vocals. One side of this album is a live show with the excitement of the audience obvious, and the other is two tunes, one a very-reggae number and the other a very uptempo Calypso tune, both with instrumental dub versions. The whole album is very conscious in a positive, upfull fashion that will please politically progressive listeners.



The Rhyth-O-Matics — *Walking In The Shadow* *(Catero 016. $12.13 postpaid from Down Home Music.)*

The lead track on this album is called "Afro-Ska," and that is a pretty good summation of what is going on here. There is also some Latin influence in the mix and good old American soul/ funk, but mostly it's massive ska horns and riffing guitar over a galloping beat with generous amounts of imaginative percussion and vocal interjections adding to the excitement. The more African tracks have a lighter flavor, with a pan-African mix of Zairean soukous, Ghanaian highlife, and a little South African kwela. It's really one of the most World Beat albums around, although to close I'll borrow a sentence from the Rhyth-O-Matics themselves: "To think of World Beat as a new style of music is totally misleading, since three-quarters of the world is playing this kind of music and has been for a long time." ■

FASHION DREAD RASTA

ON THE ONE IN JAMAICA WITH BOB MARLEY'S CHILDREN

BY GREGORY STEPHENS

It is amazing that a religious sect on a small Caribbean island could produce a style of pop music that has had toes tapping around the world.

A lot has happened to Jamaican music since Bob Marley's death in 1981. Greg Stephens lives in Austin, Texas, where he is a journalist and songwriter. Part of his fascination with reggae music stems from time spent in Southern Bible Belt churches in his youth. —*Richard Nilsen*

THE HISTORY OF POPULAR MUSIC BEGINS with slavery.

With the African diaspora, the rhythm of the earth was ripped apart and left to right itself where it could.

Black rhythm filtered across the earth, infecting the West with a fever which is gradually taking over the host. The whole world is sneezing, and more and more of us are liking it. Who feels it knows it.

As Michael Ventura described it in "Hear That Long Snake Moan" (*WER* #54 and #55), the Africans built their temples in their bodies with their rhythms. Like a Morse code of the unconscious, African-derived music has a not-entirely-understood unifying force, a power I call the One.

"Keep it on the One," musicians will say. A form of Unity. Nowhere have the magical properties of African music been more fully developed than in Jamaican reggae, as epitomized by the music of Bob Marley.

Although we still tend to think of reggae as cult music, it has had an influence entirely disproportionate to the number of people who actually practice the Reggae Rasta beliefs (see glossary). Jamaica, after all, is an island of only two million people. But the list of popular entertainers upon whom reggae has made a major artistic impact is staggering: the Clash, Eric Clapton, Boy George,

Photo of Ziggy Marley by James Crowley

REGGAE GLOSSARY

Anancy — the Jamaican Trickster; a spider-man who performs miraculous feats of cunning; originally from the Ashanti tribe in West Africa.

Babylon — a Biblical term used by Rastas to refer to the corrupt establishment or power structure; the "shitstem," in Peter Tosh's words, that is ruled by materialism.

Blood Clot — a Rasta curse somewhat similar to "S.O.B." *Ras clot* is worse.

Dance Hall — the prevalent popular style of music in Jamaica, which came to prominence in the late 1980s. It is characterized by trademark, extended breakdowns. Dance Hall also refers to the sound-system dances that gave birth to reggae.

Dreadlocks — style of wearing the hair long, favored by Rastafarian men.

DJ — the Jamaican equivalent to an American rap artist. A disk jockey rides the groove; more often in live performance than on the radio. Used somewhat interchangeably with "toaster."

Fashion Dread — author's term to denote a group of people and a style that fuses the most easily recognizable Rasta symbols (dreadlocks, etc.) with cutting-edge Jamaican fashion.

Ganja — marijuana. Commonly referred to as *herb*, which indicates the Rasta belief in its medicinal properties.

Garvey, Marcus [1887-1940] — Jamaican national hero who emigrated to the United States and organized a black nationalist movement in the 1920s. Garvey published a newspaper, organized a steamship company (the Black Star Line), and advocated a return to Africa by black Americans.

Hip Hop — a general term used to refer to American rap music and its attendant lifestyle of B-Boys, fly girls, graffiti, etc. Originally based in New York ghettos, hip hop is an increasingly international phenomenon. It has had an incestuous relationship with Jamaican music, especially Dance Hall.

Jah — Rastafarian term for God.

Rasta — an abbreviation for "Rastafarian," one who subscribes to a system of thought loosely based on concerns with the liberation of African peoples, a belief in Haile Selassie I or Jah Rastafari as God incarnate, and in repatriation to Africa as the black man's redemption. Used here in a generic sense as well as in reference to individuals. Rasta has dropped most of its racial overtones over time to adopt a world unity philosophy characterized as "one love."

Reggae Rasta — author's term for the type of reggae which emphasizes a Rastafarian message. In some sense, Reggae Rasta is a loosely organized church.

Riddims — the rhythms of Jamaica which draw their inspiration from the Nyabingi tradition, itself an amalgam of rhythms created by rural immigrants to Kingston based on the African *kumina* and *buru* drumming styles. Among Jamaican musicians, riddims refer more specifically to bass lines.

Spliff — a marijuana cigaret, like an American joint, but often larger in size.

Toaster — see "DJ."

Grace Jones, Level 42, the Police, the Rolling Stones, Sade, Tina Turner, the Talking Heads, Stevie Wonder, just to name a few. It would be almost unthinkable for many younger British acts like Terrence Trent D'Arby, Stan Campbell or Hollywood Beyond to put out an album without reggae references.

Granted, it is the *style* of reggae more than its content that has been absorbed into the language of international culture. Reggae as a *fashion* or a badge of hipness has continued to grow in influence while Jamaican reggae music per se has devoured itself, become a mirage, a ritual intended to evoke former glory.

With the passage of time it has become clear how much of that former glory was tied up in the spirit of Bob Marley. Millions of people of all races and religions see Marley as a prophet, a messenger of the One. With Marley's tragic early death by brain cancer in 1981, the movement lost its voice. Many lesser prophets appeared, but the spirit of unity that made the Marley-era reggae's golden age quickly dissipated as the realities of the Reagan era (and that of his Jamaican counterpart, Prime Minister Edward Seaga) set in.

Reggae Rasta was more like a Caribbean Ghost Dance than an organized system of thought, anyway. Without Marley's leadership, the music grew repetitious, the message clichéd. Marley's children have grown up with a different set of values.

Jamaica's current popular music, Dance Hall, has roughly the same relation to Marley-era reggae that American rap music has to '60s soul. Like their fathers, this generation of performers often looked north for inspiration. But instead of encountering the harmonies of New Orleans R&B, they heard the arrogant, angular beat box that is hip hop. And instead of spiritual inspiration, many of the Dance Hall followers looked no further than between their own legs.

In August 1987 I went to Jamaica to witness the 10th annual Reggae Sunsplash Festival, which occurred auspiciously during the 25th anniversary of Jamaican independence, as well as the 100th birthdate of Marcus Garvey.

In many ways, Sunsplash 10 was a battleground for control of the minds of the youth between the Dance Hall Posse — which had the money and the momentum — and the Reggae Rasta Posse,

which had Marley and moral authority. In sheer numbers, the X-rated Dance Hall Posse was clearly winning the battle. But in the war, Reggae Rasta had seeded the unconscious of the youth. They saw images of their fathers returning, editorialized and institutionalized by the mythmakers of Babylon. That twist was endlessly rebroadcast and returned with comment until it acquired the resonance of legend.

It helps to keep two things in mind while considering Jamaican music. First, the island's population is divided into Rastafarians and non-Rastas. It's hard to estimate how many there are either way, because so many fall in the cracks between belief and unbelief. But the mainstream non-Rastas clearly control most of Jamaica's economic superstructure. They have a historically antagonistic relationship to the Rastas, who keep prophesying their downfall as part of the Babylon system. At best the mainstream Jamaicans tolerate the Rastas; at worst, those who fear the Rastas' influence have waged a consistent campaign of terror against them.

Second, although Jamaica does not quite fit the stereotype of a nation stoned out of its mind, an estimated 80 percent of the populace uses marijuana in one form or another. The herb fuels the Rastas' Messianic mindset and also serves as a pretext for oppression.

Peter Tosh, a founding member of Bob Marley's group the Wailers, a running mate of the Rolling Stones and Reggae Rasta's resident renegade, was shot to death gangland-style in his home shortly after Sunsplash 10. He was merely the latest in a string of Rasta musicians to be slain, a long list that also includes Wailers drummer Carlton "One Drop" Barrett.

"Reggae" is the generally accepted term for Jamaican-inspired music. But in trendy Jamaica, reggae is just one of a series of musical styles. Before reggae, there was Rock Steady and Ska. After reggae, there was Rub-A-Dub and Dance Hall.

The Wailers started out in the early '60s as a Ska trio with R&B influences from the American south, shifted semi-successfully into the Rock Steady period, then busted out as they eased into and helped define Reggae, in collaboration with Chris Blackwell and Island Records.

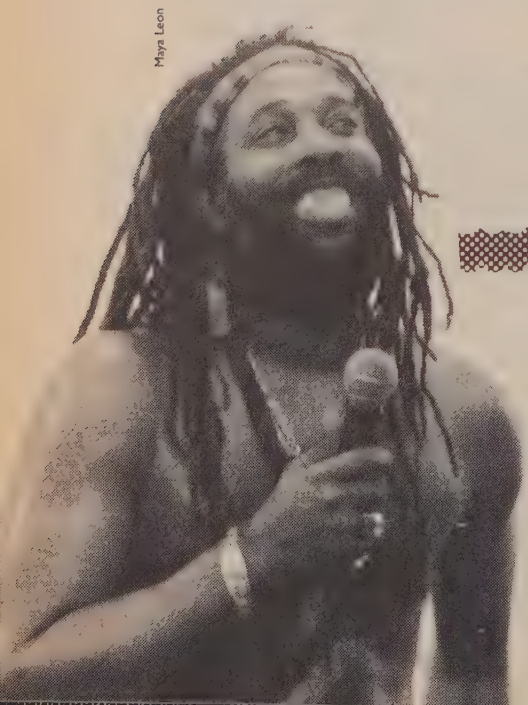
Bob Marley had the charismatic gift and the good timing that enabled him to succeed in fulfilling certain Messianic projections. Millions saw Marley as, if not exactly the Black Messiah, then certainly one of the New Prophets. Bob Marley was On the One, and everyone wanted to be On the One.

But as influential as Marley and the Wailers were, they were still just a part of the shifting tides of Jamaican music. In later days, Marley would often name the DJ Big Youth as his favorite Jamaican entertainer.

Today's Dance Hall music has gone international. Reggae's grandchild has grown up ill-mannered, full of all the crimes and energy of youth. Reggae Rasta fears that it may have lost Dance Hall to Babylon. Or that the prodigal son may have simply blown off the spiritual concerns of Reggae Rasta, and contented himself with trying to get his cock wet.

Reggae Rasta's only hope to fulfill its dream of bringing a reign of peace and unity to the world is for the youth to carry on the Rasta message.

Some of the Rasta message is indeed being forwarded, but in the language of a new generation. Rasta has become a fashion that I call Fashion Dread.



Maya Leon

Jamaican DJ Big Youth.

JAMAICA IS AN ISLAND THAT HAS taken the "on the One" or "Unity Consciousness" to a whole new level of thinking. When Jamaicans get on a groove, they really get on the One. Riddims drive Jamaican music, and when a new riddim hits the top, everyone cops it. It's the King Riddim for a few months or even years in basic formula. In a single-dominated record industry, the competing studios will endlessly recycle a riddim when it gets hot. In fact if it gets *really* hot, like Admiral Bailey's "Punaany" in 1987, people will want to get the same charge over and over, variations by the DJs that often use the exact same rhythm tracks. It's

a matter not only of profit but of style and a way of thinking. Riddims are treated in some sense as scripture, to be quoted often by the faithful. And therefore riddims are public property, a cultural heritage.

Early DJs such as U-Roy and Marley's successors like Big Youth mixed in a healthy dose of Rastafarian teaching along with the usual posturing. But later DJs, whose style was a juggle somewhere between singing and rapping (some called themselves "singjays"), did not necessarily share the Rastafarian ethic. It didn't take long to see that the Jamaican kids were into a new thing, something wild. The Devil was back in Jamaican music, seducing young virgins everywhere and then bragging about it on the air. Almost every Jamaican youth I encountered at Sunsplash asked me the same thing: "Are you coming to DJ Night?"

The Dance Hall Posse's reputation preceded them at Sunsplash 10. Few of my travel group wanted to brave young Jamaican toughs because of stories circulating about pickpockets. Very few cabbies were willing to fight the 15-mile bumper-to-bumper traffic on DJ Night for less than highway robbery. Three of us waited it out and finally landed a cabbie who was desperate for American currency.

It was slow going, so there was time to let the scenery soak in. Just outside of Montego Bay, on the narrow road to Bob Marley Memorial Stadium, was a huge billboard only the illiterate could have missed:

AIDS CAN KILL
USE A CONDOM AND LIMIT YOURSELF TO ONE PARTNER
KNOW THE FACTS

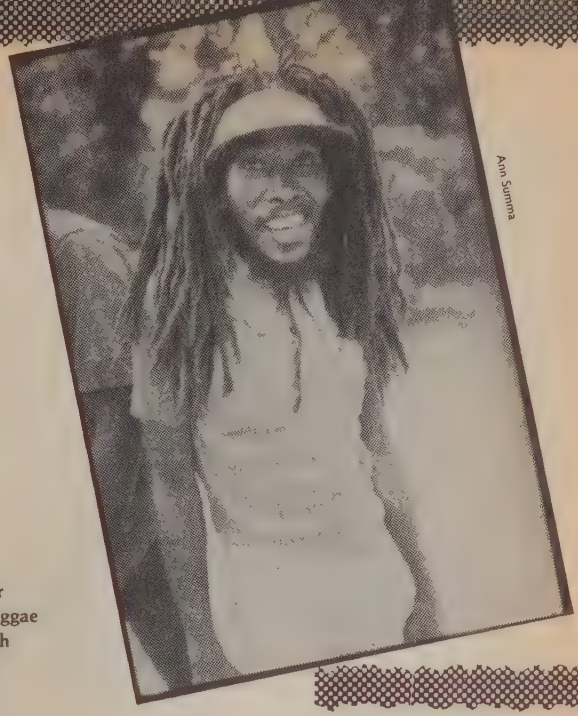
The van gradually slowed to a crawl. When people began passing us on the shoulders, we got out and walked the last several miles.

It seemed like we walked forever. The road was swollen with people walking quickly, and the momentum carried us along, the sensation of being in a river approaching a falls. We could hear the pulse of the soundstacks massaging the earth in the distance.

The vendors called out incessantly, sometimes jumping in our path, their eyes hungry, insistent, some weary, others bitter, thousands fated to sell the same pack of gum, it seemed, or merchandise only slightly more enticing.

Inside the arena, the DJ fans had taken over. The tension hung as thick as the gritty, fragrant smoke from hundreds of cooking fires and thousands of spliffs. Across the enormous field, 50,000 people jostled jowl to jowl. The language that rushed off the stage was really foul.

This was not a night for the righteous. This was



Ann Summa

Spectator at the Reggae Sunsplash Festival.

Youth Night, and the youth were full of piss and vinegar. The Youth Posse believed in Star Power, not Jah Power. The DJs were more about bragging rights than human rights. Still, I found it hard to fault their energy and showmanship, which was phenomenal.

This night belonged to the devilish energy of these new Jamaican folk heroes, post-modern journalists whose spontaneous reports from the frontier of sex and society kept their army enthralled.

Admiral Bailey, the current (1987) superstar of Jamaican music, ruled the DJ fleet. He wore an immaculate white admiral's uniform, complete with white gloves and cap. He owned the stage — which was built as a model of the Black Star Liner, Marcus Garvey's famed repatriation ship, complete with portholes. From the narrow lane provided for photographers, I could look back and watch thousands of youths leaping in unison whenever Admiral Bailey landed a direct hit.

Admiral Bailey's megahit "Punaany" is (in case you haven't inferred it) about the international pursuit of — in literal translation — pussy. This beefy bard of the bedroom provided a sailor's view of shore — women lined up waiting for his services.

Admiral Bailey's crotch-grabbing out-beastied the Beastie Boys; his humor outweighed the Fat Boys, and his braggin' outran Run-D.M.C. He was the Jamaican Pan, Coyote and Anancy all rolled in One. He at once enlarged and reduced the world to these mythic, simplistic dimensions:

"Sit on it."

"Run from it." ►

It was the command of the sexual renegade, a metaphor for the common man of Jamaica: "We are hard. We are coming at you. Sit on it. Or run from it. The choice is yours."

But even in slackness there was a moral. That huge anti-AIDS billboard on the highway got constantly rebroadcast by the DJs. Admiral Bailey did a *preventive measures* rap. When someone threw him a pack of condoms, he unrolled one and acted out the whole process. That undoubtedly offended the moralists, but it was probably the most constructive thing he could have done for the hot-blooded youth. Condoms were now in.

The crotch-grabbing got old just as fast with Dance Hall as it did with hip hop. I kept thinking, is that really the only thing on their minds? The music itself was relentlessly repetitive, but the way the DJs orchestrated repeated breakdowns to build up and release tension had been raised to an art form. Basically Dance Hall was the push and pull of sex.

DANCE HALL CAN BE SEEN AS AN extreme *reaction* to Rasta piety. The gap between the sensual, musical side of Jamaican popular music and the Messianic, message-laden Reggae Rasta has grown rapidly since Marley's death.

In some ways, poet-singer Mutabaruka epitomized this split. He embodied the Rasta message in its most analytical form, almost devoid of an entertainment sensibility as such.

Gregory Stephens

Mutabaruka burst upon the scene shortly after Marley died, the leading light of a movement called "dub poetry" that also included England's Linton Kwesi Johnson and fellow Jamaican Michael Smith, who was stoned to death by a political gang for his brutal honesty.

With his trademark streak of white hair parting his dreads, Muta cast a striking figure. He had the raw power of the prophet fresh from the wilderness. The opening lines from his debut album *Check It* set forth his credo, a new theory of aesthetics:

"Of course we can't write about flowers
& bees & birds & trees
And lovers in the park & all them someday.
What use we 'ave a write about someday?
Right now the reality different,
We haffa write about South Africa,
the youth in the ghetto
We haffa write about Inglan, we haffa write
bout all dese tings."

Muta was like Bob Marley's intellectual cousin — Franz Fanon set to reggae. And almost alone among the Rastas I've been exposed to, he is an ardent feminist. Muta's Sunsplash booth, representing his Kingston store ("Food For Life") was the vortex for an enclave of talented Jamaican women.

Muta's Sunsplash set wiped out any doubts about his place near the top of the Reggae Rasta world.

After entering in his customary white prophet's robe, he skinned down to a pair of white dungarees and launched a tirade against the slackness of the DJs. He called them "bloodclots" and worse. The audience roared, many of them egging him on as a black congregation would encourage the preacher.

During Muta's incendiary reading of "Dis Poem," I got the eerie feeling of looking the entire black race straight in the face. The poem was revolutionary in style and content, written on the run, in the streets, outside known literary tradition but perhaps the root of a new tradition.

The man born Alan Hope made a few self-deprecating comments admitting he was not really an entertainer like the DJs. But he had obviously

Heather Murray is one of a new generation of Jamaicans who are bringing Rastafarian beliefs into the future. The 22-year-old model, who was named Miss Jamaica Fashion 1986, combines Rasta and high fashion in her wardrobe and lifestyle. Heather dates a 37-year-old Rasta musician against the wishes of her parents and is friend to reggae stars like Mutabaruka.

connected on a gut level. By the time Muta and the band kicked into the rude urgency of "White Mon Free Up The Land," the crowd was electrified. Muta was back on the One.

ANYONE WHO CAN'T SEE THE ECONomic as well as artistic potential of reggae crown prince Ziggy Marley hasn't yet understood the Messianic fervor that runs among Third World peoples, especially in Jamaica. Jamaican music has been able to infect nerve centers in the New World — particularly New York and London — spreading a less severe case of Messianic expectations among American Dream refugees and entertainment consumers. So there is a potentially immense audience for a young, sexy, fashionable, implicitly spiritual Third World superstar.

Ziggy is like a reflection of his father Bob, a young echo. As time goes on it is almost scary how this reflection seems to grow more and more like the original, in spirit if not always in style. One hears echoes of many things, the American counterculture among them. Ziggy is the counterculture that never went away; he is cut from the roots of the counterculture; the seed of the counterculture that had to journey to a foreign land to find soil deep enough to nourish it, and people with attention spans long enough to water it.

Of course, Ziggy and his siblings in the Melody Makers are all near 20, so they can appeal to a new generation of Babylon's children who think reggae is "jammin' mon" but who aren't haunted by memories of Bob Marley. When they think of reggae, they may think of a Budweiser commercial with Spuds McKenzie, or, if they are trendy, of UB40.

Ziggy has in fact been groomed for the role of Bob Marley's successor from an early age. As Marley's eldest son, he was widely seen as heir to the heritage, and he was given moorings for the journey by a mixture of strict but worldly Rastas and Jesuits. The images that have come out of this man-child's imagination remind me of the paintings of the children of Guatemala and El Salvador. They are all images of a world at war.

Fortunately Ziggy seems to have inherited his father's ear for melodic hooks. Thus far he is sinking them into strident calls to action and "bald slogans." They are catchy, but limited by the abstracted idealism of a youth who has an unusually broad, but also somewhat insular, view of the world. It will be interesting to hear what Ziggy comes up with when he comes home from the battlefield to write about love and other shades of grey.

Ann Summa

The next generation — Jamaican children outside the Sunsplash Festival.

REGGAE RASTA HAS AN IMPORTANT message that Marley sent us on our way singing. It says that the liberation and unification of the black race is crucial to the salvation and survival of the One Race, the human race. It was a concept that most of the Anglo/Western world did not want to hear, so many latter-day reggae stars are learning to imply it.

Reggae, a language of implications, often implied its own divinity, either through words or through sound itself. For instance, a true reggae fan will tell you that a good reggae bass line is the voice of Jah his own self.

Reggae Rasta postured as a sort of modern electronic church of the unconscious mind, a rhythmic religion destined, in some hybrid form, to get everyone on the One.

Those who want reggae to keep implying our divinity in Bob Marley's language are no better than right-wing American evangelists who want us to pretend we are living in the time of Christ. Both are missing the point. We keep movin' on down the road, and if we are to keep it on the One, each generation must invent a new language to make sense of its existence. We hear the words of the master but we listen to his children. We dance with them if we are to enter the future in useful fashion.

The elders don't like it, but this is a generation

that talks about sex as if sex is Jah. Maybe they're onto something, if that's the only thing on which the human race can come together. One thing is certain: this obsession with sex didn't just pop out of thin air. If young people have to make a choice between spirituality and sexuality, guess which one most of them will choose?

Bunny Wailer had some wise words at the end of Sunsplash, in an effort to bring together the warring factions of the post-Marley world. "There's been a lot of talk about the DJs as if Dance Hall was a new thing," Bunny noted. "We all came out of the Dance Hall. Reggae is the roots and the DJs are the branches, but we are all part of the same tree."

As a hybrid form of music and religion, Reggae Rasta developed the power to awaken a spiritual awareness in people who would not admit to being spiritually inclined. It awakened a long-dormant human urge to look over the horizon for One who is greater. I have the feeling that we are going to be seeing Rasta symbols reappearing in popular culture for a long time, because Rasta has an immense transformative power, a power not susceptible to reason, but a power that is capable of being perpetually reinvented.

The most significant hybrids in the post-Marley reggae world are taking place on the frontiers between rap/hip hop and Dance Hall. The two are thrown together in the hippest clubs of New York and London in such a way that one can sense an emerging fusion that can also incorporate a fashionable version of the Rasta message. We've already seen something close in the work of toasters like Shinehead, whose "Rough & Rugged" album features a hip hop-style anti-coke rap on top of Bob Marley's "Who the Cap Fits" chorus.

In Jamaica, New York, London and other cross-cultural meccas, the fusion of Rasta with the contemporary style I call Fashion Dread is a growing phenomenon. On one of my first nights in Montego Bay, I went to a "Beach Party" that was preceded by a very racy fashion show. After the show, I watched four of the models walk through the crowd and onto the arms of some sharp-dressed Rastas. Fashion and Dreadlocks paired off rather nicely.

Rather than chastising the admittedly sexist first fruits of this new music, we would be better off accepting the manic energy of our rappers and DJs and rewarding those who manage to stumble on the ancient discovery that sexuality is a path with heart. You cannot fruitfully separate music and message; you cannot healthily separate sexuality and spirituality, because they are One thing. ■

Whole Earth **CD-ROM Catalog Update**

WE HAVE COMPLETED THE second of three phases in the birth of an electric Whole Earth Catalog. During this stage we added about 400 reviews of music available by mail. Each includes a 30-second sample of sound as an excerpt. To use it, you find a topic you are interested in, select a music mail-order catalog, pick an album, and read the review. With the Macintosh mouse you touch an icon of a musical note near the picture of the album to hear the music play through the okay Mac speaker (or your hi-fi set if you have it connected). For example, imagine being able to touch the covers of the albums mentioned in Jonathan E.'s World Beat survey on page 53 and hear what he is excited about. You'd then have a mini-Whole Earth Catalog of Music, and some idea why Jonathan and the other CD-ROM crew have been days staring into computer screens lately.

Whole Earth's golden hit. Tim Oren, of Apple Computer, holds the first pressing of the Electronic Whole Earth Catalog on compact disc (CD-ROM), for which he wrote the programming. It's gold-plated for posterity (there is a suspicion that the usual aluminum coating may only last decades). The major drawback is that you need a $1,250 CD player *and* a Mac to read it.

Recording music into the Electronic Catalog relied on fairly low-tech methods. Music arrived on CDs, vinyl records, and cassette tapes. Sound on CDs and albums were transferred to tape first, and then all cuts were digitized from cassette. To go from vinyl record to tape, Jonathan used "just any tape deck" to record onto, but stressed the advantages of a heavy-duty turntable to play the albums on. He used a Technics 1200 MK2 turntable which gets up to speed quickly and evenly, essential in recording a lot of short excerpts.

We started out digitizing music using Sound Capture by MacNifty, which did an all-right job. We now use MacRecorder, which is much better on several fronts ($199 from Farallon Computing, Inc., 2150 Kittredge Street, Berkeley, CA 94704; 415/849-2331). In general, MacRecorder software gives more flexibility and visibility to the task of building a sound track. It lets you take a sound from a tape (or from MacRecorder's built-in microphone) and put it into a Macintosh file to edit or fiddle with, and gives you a soundgram on your screen to work with. Editing by manipulating the visual pattern is easy to learn, to control, and tremendously satisfying to do. Already, other buyers are using it to build sound libraries of animal, environmental and musical sounds that can then be "processed" and shuffled in the way computers do so well.

More than the unique indexing powers and compactness of information in CD-ROM, the dream of having sound intermingle with text and graphics is what makes this Catalog better than a book. It should be available for sale in laser plastic by Fall 1988. —Kevin Kelly

Ballast

In exchange for a few stamps per year, you'll receive this idiosyncratic dispatch of verbal illusions and visual anecdotes. Works like conceptual anti-freeze — keeps your inspiration unclogged. May it live long. —Kevin Kelly

•

When I started writing that story, I didn't know there was going to be a Ph.D. with a wooden leg in it. I merely found myself one morning writing a description of two women I knew something about, and before I realized it, I had equipped one of them with a daughter with a wooden leg. I brought in the Bible salesman, but I had no idea what I was going to do with him. I didn't know he was going to steal that wooden leg until ten or twelve lines before he did it, but when I found out that this was what was going to happen, I realized it was inevitable. —Flannery O'Connor, "Writing Short Stories" (referring to a story called "Good Country People"), as quoted in Raymond Carver, "On Writing" in *Fires: Essays, Poems, Stories.*

•

I have to go feed the goldfish. I have to go look at the crops. I have to go see a man about a dog. I have to pay a visit to the old soldiers' home. I have to retreat to the holy of holies. I have to go sharpen the skates. I have to go visit the chamber of commerce. —Euphemistic ways to excuse oneself in order to go to the restroom, according to Lester V. Berrey and Melvin Van Den Bark, *The American Thesaurus of Slang.*

•

When artists are living and working as closely together as we were in those years, they are all obviously influenced in some degree by one another; they all derive motifs from one another. I remember one day when Juan Gris told me about a bunch of grapes he had seen in a painting by Picasso. The next day these grapes appeared in a painting by Gris, this time in a bowl; and the day after, the bowl appeared in a painting by Picasso. —Jacques Lipschitz, with H. H. Arnason, *My Life In Sculpture.*

The cat's eyes were bigger than saucers, a 19th century engraving. Artist unknown.

Ballast
Roy R. Behrens, Editor
$2/year (stamps only — 8 25¢ stamps or 2 stamps/single issue) from:
Ballast
Art Academy of Cincinnati
Eden Park
Cincinnati, OH 45202

•

I know a man who, when I ask him what he knows, fetches me a book to show me. He cannot so much as tell me he has piles in his behind until he first looks up in his dictionary the meaning of "piles" and "behind." —Michel de Montaigne (Renaissance essayist) in Marvin Lowenthal, ed., *The Autobiography of Michel de Montaigne* (Boston: Houghton Mifflin, 1935).

•

[Below] Haircuts of young Native American males of the Osage and Omaha nations were indications of the plant or animal clan with which they were associated. For example, the first haircut from the left on the top row was analogous to the head and tail of an elk, while the second from the right on the bottom row was emblematic of the teeth of a reptile. See F. La Flesche, "The Osage Child-Naming Rite" in *43rd Annual Report of the Bureau of American Ethnology 1925-1926* (Washington, D.C., 1928).

This remarkable sequence of portraits was produced by an anonymous inmate in a mental institution, a person who was diagnosed as schizophrenic. These portraits have been reproduced in J.H. Plokker, Art From The Mentally Disturbed: The Shattered Vision of Schizophrenics (Boston: Little Brown, 1965) p. 113. According to that book, "It often occurs that a patient will draw long rows of heads or other figures on one sheet, these showing little if any variations. Or he will reproduce the same small scene in an identical manner several times in juxtaposition, then suddenly introducing a small variation by adding or omitting an element, then returning again to the old stereotyped pattern" (p. 153).

A Parent's Guide to Children's Video

The premiere edition of this magazine is a valuable resource for parents — a buyer's guide to children's videos. It's the most inclusive listing of quality kidvid I've seen. It includes little-known educational and religious videos, shorts (both foreign and domestic), as well as feature films. I disagreed with some of the reviews — you probably will too — but they are informative and detailed. This issue sets a high standard. If later issues live up to it the magazine will provide an important service: helping parents monitor and guide their children's media absorption. I hope it succeeds. —Corinne Cullen Hawkins

A Parent's Guide to Children's Video
Martha Dewing, Editor
$14.97/year
(6 issues) from:
Children's Video
389 4th Street
Brooklyn, NY 11215
800/972-5858

■

Walt Disney Home Video
STORIES AND FABLES Volumes 1-19
Walt Disney, 50 minutes each, ages 6 and up, live action.
This is a massive international series of fables, folktales and fiction in 19 volumes originally shot on film and ultimately transferred to videotape. Each tape consists of two complete stories that are well-acted and beautifully narrated (the actors do not ever speak but complement the narrative in a simple and clear manner). . . .

Stories and Fables

The stories are not well known to American viewers as they seem to be (primarily) folk tales from many faraway lands. I suspect, from the scale and high calibre of the production (and absence of date on the cassette) that this was shot some years back and recently repackaged for the home video market. (Also, producer Barry Levinson is doing major features, like *Diner,* these days.) Nonetheless, the stories and characters are timeless, and the simple style of their execution is a pleasure in a world of gimmicks and high-tech hoopla.

This series may be a well kept secret on a back shelf at your neighborhood home video store or library, but ask for it and try out a couple. The less jaded you and your children are, the better you'll like it. It resembles home cooking — nothing too fancy, just good, honest fare.

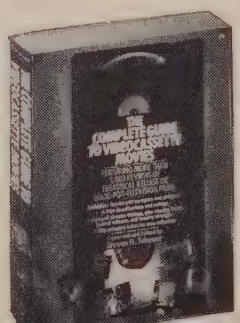
The Complete Guide to Videocassette Movies

I've rented my share of video dogs — predictable suspense, flat comedies, fizzled action movies. Video rental store catalogs hype all their movies equally — no help there in deciding what movie to take your chances on. And with the staggering array of videos to choose from, a good videocassette guide will save you money and disappointment.

In a survey of six videocassette guides, I found this one to be the definitive consumer guide. The others either gave long, in-depth, witty and wonderful reviews of only a few movies or short, dull or unimaginative reviews of thousands of films.

ACTION/ADVENTURE
CHILDREN'S
COMEDY
DOCUMENTARY
DRAMA
FOREIGN
HORROR/SCIENCE FICTION
MUSICAL
MYSTERY/SUSPENSE
WESTERN

The Complete Guide to Videocassette Movies
Steven H. Scheuer, Editor
1987; 669 pp.
Henry Holt & Co.
New York, NY
$19.95
($22.95 from Whole Earth Access)



This guide, with over 5,000 reviews, includes every theatrical and made-for-TV film available by fall 1987 (except for pornography). Reviews include the right kind of honest detail to help decision making and are fun to browse. Movies are listed alphabetically, with icons identifying the genre, and are indexed by genre in the back. The only thing missing is an index by actors and directors.
—Corinne Cullen Hawkins

INVASION OF THE BEE GIRLS ☆☆
1973, USA, R
Victoria Vetri, William Smith, Anitra Ford, Cliff Osmond, Ben Hammer. Directed by Virgil Vogel. 85 min.

It has its moments, but it definitely does not live up to the promise of that title. The plot concerns the growing phenomenon of certain beautiful women who end up literally loving their dates to death. As science fiction, this film is pedestrian. As camp, it's fun but second-rate (although watching some of those sleazeballs drool over these queen bees before they expire is worth the price of the rental). The film buzzes along as expected, but a few parts are good enough to make this a sporadic honey of a parody.

INVASION OF THE BODY SNATCHERS ☆☆☆
1956, USA
Kevin McCarthy, Dana Wynter, Larry Gates, King Donovan, Carolyn Jones, Jean Willes, Ralph Dumke, Virginia Christine, Tom Fadden. Directed by Don Siegel. 80 min.

Don Siegel's thrilling B movie concerns a small town besieged by seed pods that grow into replicas of the townfolk and then supplant them. It hardly seems relevant now whether Siegel intended the pods to symbolize the Commies or the forces of McCarthyism (both sides have been amply argued). Despite its monster-mash title, the true terror at the heart of the film grows not from political paranoia, but from the obsession with social conformity that marked the fifties.

INVASION OF THE BODY SNATCHERS ☆☆☆½
1978, USA, PG
Donald Sutherland, Brooke Adams, Leonard Nimoy, Veronica Cartwright, Jeff Goldblum, Art Hindle, Lelia Goldoni, Kevin McCarthy. Directed by Philip Kaufman. 115 min.

This richly enjoyable modern horror story is even more fun than the 1956 Don Siegel classic on which it's based. Once again, vegetable pods arrive from deep space to replace humans with emotionless replicas. But this time the characters are so intense, attractive, and idiosyncratic that it's poignantly clear what they have to lose. With a terrific turn by Leonard Nimoy as a smooth-as-silk pop psychologist.

VIDEO BY MAIL

UNLESS YOU LIVE IN A big city, good videos, like good movies, are hard to find, but you don't have to settle for mediocre videos any more. From the obscure to the blockbuster, you can get it all. Within the last ten years several mail-order video businesses have sprung up — rental and sale. Here's what they have to offer.

—Corinne Cullen Hawkins

MOVIES UNLIMITED

Weighing in at over two pounds, this catalog's the biggest anywhere. 600 pages, thousands of titles — if you're starved for entertainment, gorge yourself here. Lots of junk, lots of gems, just about every American feature movie ever made is listed in this browser's delight. There are some foreign films as well, but only the major, well-known ones. Sale prices range from $9.95 to $79.95, no rentals. Formatted in VHS, Beta, and Laserdisc.

Movies Unlimited: catalog **$9.95** postpaid ($7.95 refunded with your first order). 6736 Castor Ave., Philadelphia, PA 19149; 800/523-0823.

DISCOUNT VIDEO TAPES, INC.

If you're looking for a novelty video, you're likely to find it here. *Santa Claus Conquers the Martians, Assassin of Youth* (1935 killer-weed propaganda flick), and *The Secret Life of Adolph Hitler* (including rare footage from der Fuhrer's personal film library) are all here, along with hundreds of classics from the golden age of television, dozens of Saturday-matinee serials, and every grade-B Western you can think of. Better yet, Discount Video Tapes has an amazing collection of films from the short-lived black filmmaking industry of the '30s and '40s. A real find. Sale prices range from $20 to $60; rentals cost $35 for five titles/two weeks. This includes shipping to you. Return shipping is your expense. Formatted in both VHS and Beta.

Discount Video Tapes, Inc.: catalog **free.** P. O. Box 7122, Burbank, CA 91510; 818/843-3366.

CRYSTAL MUSIC VIDEO

"This catalog is the ultimate resource for folks wanting the most complete reference of music videos available." So it says in the catalog — I think it's an understatement. You'll find Big Bands, Blues, Soul, Jazz, Reggae, as well as Rock, Opera, and Musicals, all well represented. You can buy a copy of *The Rocky Horror Picture Show* — one of the many imports offered, released in Japan, but not here. (Imports can get expensive, especially from Japan, with the strong yen.) Twenty-two pages of rock videos alone. Sale prices range from $14.95 to $59.95. Rental rates are $5 for two nights, plus $2.50 postage and handling.

Crystal Music Video: catalog **free.** P. O. Box 1299, Glenwood Springs, CO 81602; 800/433-8574.

FACETS VIDEO

Hop into a foreign filmmaker's mind — see the world in a new way. Seventeen countries are represented in this catalog of 3,000 videos, which has a hefty section on independent and classic American films as well. I looked for every off-beat and art film I could think of — and found them all here. This is the catalog for film buffs and anyone else who enjoys films of substance, artistry, and peculiarity of vision. Prices range from $19.95 to $79.95; both VHS and Beta are for sale, rentals are for VHS only, and cost $10 per tape.

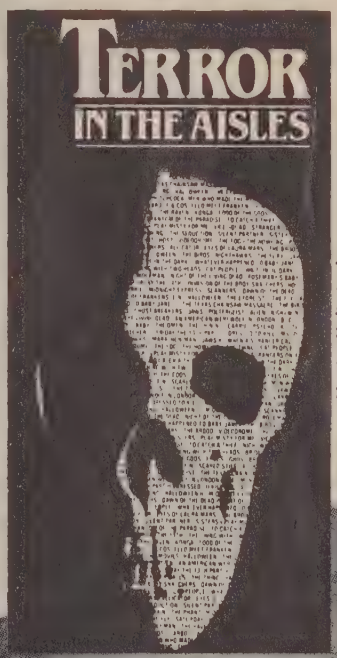
Facets Video: catalog **$4.** Facets Multimedia Center, 1517 W. Fullerton Avenue, Chicago, IL 60614; 800/331-6197.

◄ Movies Unlimited

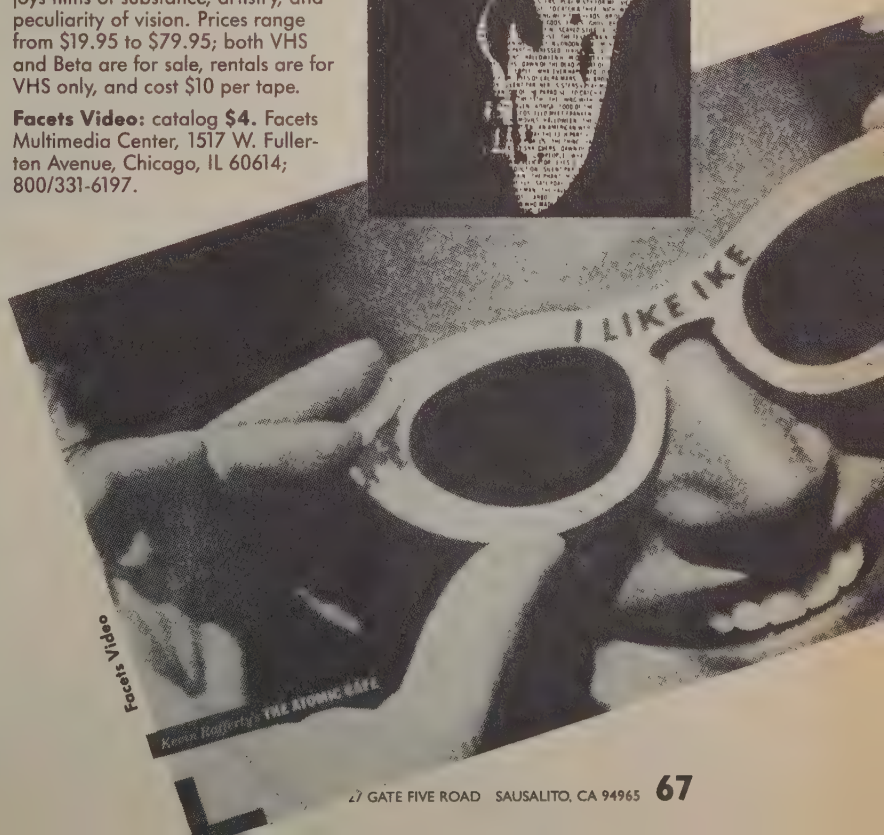
HOME FILM FESTIVAL

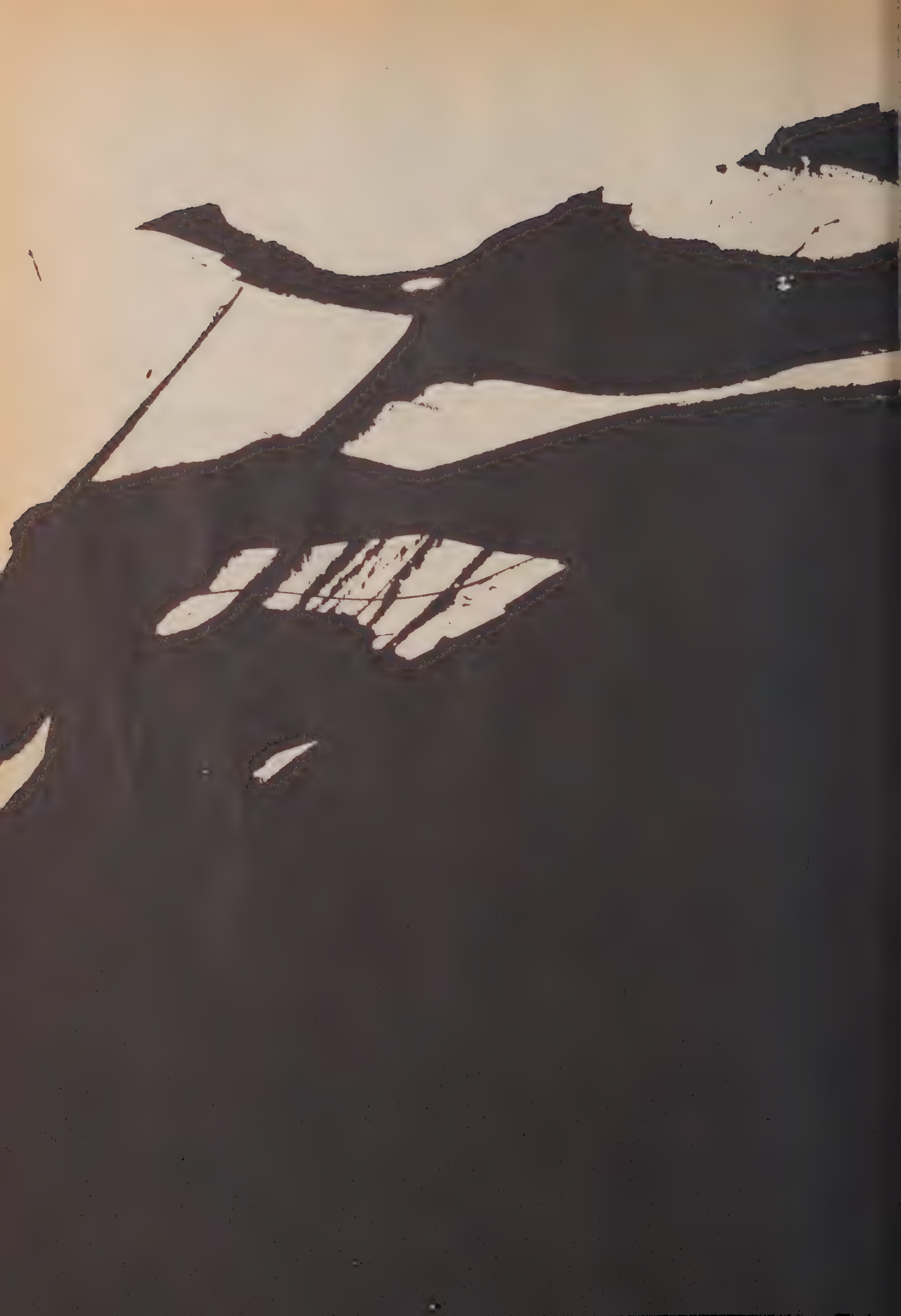
Home Film Festival is the least expensive, most convenient way to rent videos by mail. Two movies for three nights cost $11 plus postage (between $2.50 and $4). Return postage comes with the videocassettes, saving you a trip to the post office. Housebound by necessity or choice, this is the way to go. Over 500 movies are available, most of them hard-to-find quality videocassettes in both Beta and VHS format. There's a $25 membership fee the first year, $10 annual renewal thereafter.

Home Film Festival: P. O. Box 2032, 305 Linden Street, Scranton, PA 18501; 800/258-3456. ■



—Movies Unlimited



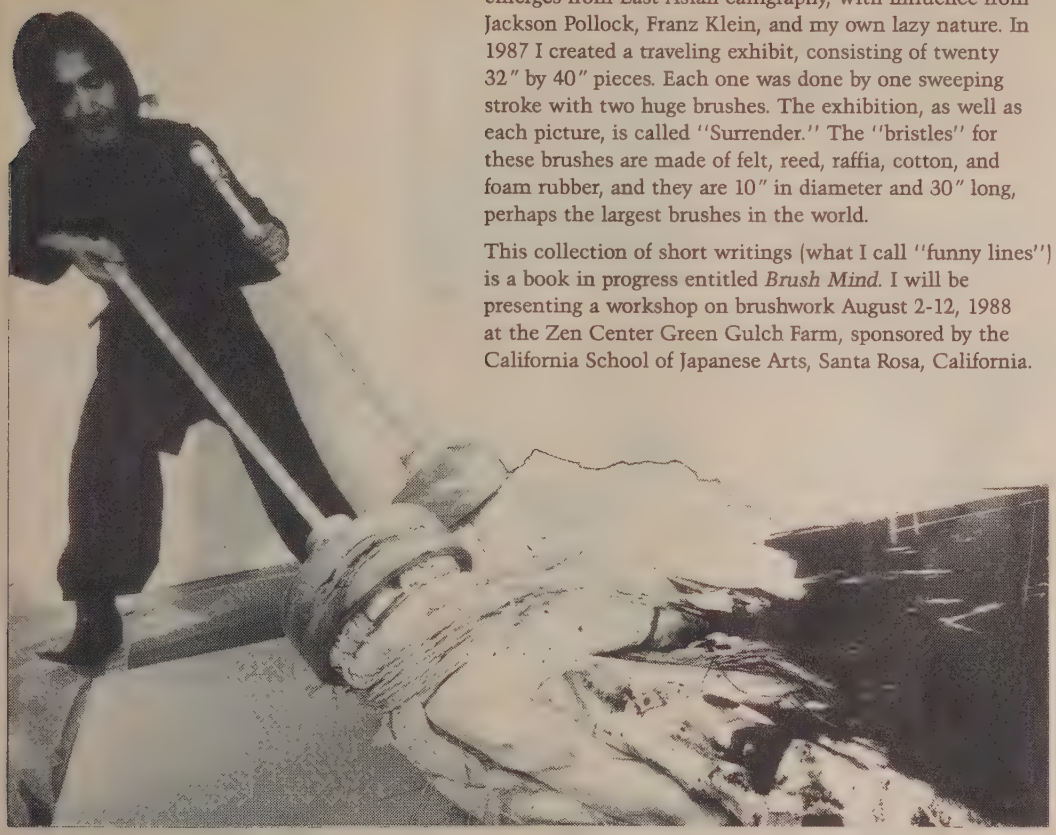


ONE STROKE

BY KAZUAKI TANAHASHI

Born in 1933, I was trained as a painter and calligrapher in Japan. From 1977 to '84 I served San Francisco Zen Center as a scholar in residence. During this time (1980) I created a genre called one-stroke brushwork. This art emerges from East Asian calligraphy, with influence from Jackson Pollock, Franz Klein, and my own lazy nature. In 1987 I created a traveling exhibit, consisting of twenty 32" by 40" pieces. Each one was done by one sweeping stroke with two huge brushes. The exhibition, as well as each picture, is called "Surrender." The "bristles" for these brushes are made of felt, reed, raffia, cotton, and foam rubber, and they are 10" in diameter and 30" long, perhaps the largest brushes in the world.

This collection of short writings (what I call "funny lines") is a book in progress entitled *Brush Mind*. I will be presenting a workshop on brushwork August 2-12, 1988 at the Zen Center Green Gulch Farm, sponsored by the California School of Japanese Arts, Santa Rosa, California.



Robert Lee

Using perhaps the largest brushes in the world, Tanahashi does brush-work for "Surrender."

When I was thirteen years old, living in the Japanese countryside, an old man invited me to study Aikido with him. Out of curiosity I joined his small group. He would throw down several young men simultaneously and say, "You see? This is breath." I was totally confused by his statement as he didn't show any of his breath. Now forty years later I ask myself, "What was he doing by throwing people down? Does it have anything to do with the art I am doing now?"

I recently realized that the old man was collecting everyone's energies, positive and negative, unifying them in an extremely intense way, and moving his body just a little bit to throw down people who were much larger than himself.

Simple is by no means easy.

What pleases our eyes is not dangerous enough.

What is obvious is most difficult to see.

MIND 17

There's no need to imagine before you paint. Painting brings forth imagination.

One-stroke painting: a painting created in one breath in a single brush stroke straight or curved.

Why am I still a one-stroke painter? I am too lazy to do the second stroke.

Immediacy is complete itself. How can we erase it?

There are no alike immediacies.

Usually a line is serious — part of a square. This makes funny lines valuable.

You cannot have accuracy without simplicity.

A line is amazing. A person's hand is the person. If you ask ten people to draw a line, how different they will all be. Someone's straight line can be very crooked. Another person's line may not look straight, but it is very straight inside.

You can't hide anything in a line. You are there whatever line you draw. And you will stay there, even when you go somewhere else. If your personality is interesting enough, the line will be interesting. So to do this, you have to be without fear.

A painting without negative space is like music without silence. For music to have intensity, the silent part must be done well: a still moment can be the highlight of a performance.

Usually I have some kind of plan: Today I will draw a vertical line which is dry. Today I will try a dot. Or splashing a line from a bowl of ink. Or today I will try a line without letting the brush touch the paper, just shaking the brush. And when the forms come, I say, "Oh, isn't this nice? I can't believe that I have done it. It's too good for me. Somehow it's there." So it makes you feel light. You don't know what is going to happen — like flying.

To paint with just one brushstroke may sound like having a party by yourself. But if you can create a painting with one stroke, why do you need more?

One-stroke painting leaves little room for thinking; the moment it's started, it's already done.

Because one-stroke painting doesn't take much time, you can paint in your friend's studio. So you can have a friend instead of a studio.

A friend of mine picked up a painting I had thrown into the garbage. He said, "What's the problem with this piece?" I said, "No problem." "Then why did you throw it away?" I said, "A painting has to have a great problem. If it has a minor problem or no problem, it's garbage."

A painting works only on the edge of not working. Then what is ungraspable comes near.

When I say a work is full, that does not mean it has a good design, a good shape, or a good part of myself, but rather that it is full of selflessness.

The quality of an art work has nothing to do with how big it is, how much labor the artist has put to it, how expensive it is, how impressive it is, or how old or rare it is.

Space carried by a thin, straight line can be extremely bold. ■

MacCalligraphy

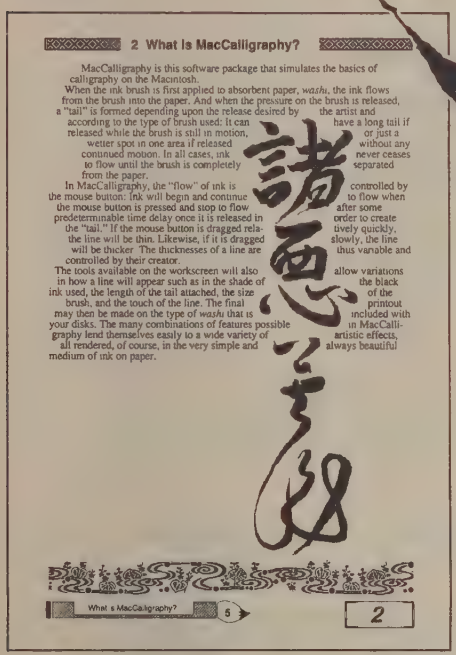
This Japanese-style calligraphy package is a class act from start to finish.

Start with the packaging — a simple wooden box — and a nicely designed manual, then into the easily used Macintosh software that lets you make brushstrokes that look like brushstrokes and not like ruled lines.

The thick- or thinness of the stroke is controlled by the velocity of the mouse: quick movement for thin lines, slow for fat.

MacCalligraphy
Version 2.0/for Macintosh.
512K. Not copy-protected.
$149.95 from:
Qualitas Trading Co.
6907 Norfolk Road
Berkeley, CA 94705

You can use the already developed seals, or create your own, for that finishing touch.



2 What Is MacCalligraphy?

MacCalligraphy is this software package that simulates the basics of calligraphy on the Macintosh. When the ink brush is first applied to absorbent paper, *washi*, the ink flows from the brush into the paper. And when the pressure on the brush is released, a "tail" is formed depending upon the release desired by the artist and according to the type of brush used: it can have a long tail if released while the brush is still in motion, or just a wetter spot in one area if released without any continued motion. In all cases, ink never ceases to flow until the brush is completely separated from the paper.

In MacCalligraphy, the "flow" of ink is controlled by the mouse button: Ink will begin and continue to flow when the mouse button is pressed and stop to flow after some predeterminable time delay once it is released in order to create the "tail." If the mouse button is dragged relatively quickly, the line will be thin. Likewise, if it is dragged slowly, the line will be thicker. The thicknesses of a line are thus variable and controlled by their creator.

The tools available on the workscreen will also allow variations in how a line will appear such as in the shade of the black ink used, the length of the tail attached, the size of the brush, and the touch of the line. The final printout may then be made on the type of *washi* that is included with your disks. The many combinations of features possible in MacCalligraphy lend themselves easily to a wide variety of artistic effects, all rendered, of course, in the very simple and always beautiful medium of ink on paper.

諸悪莫作

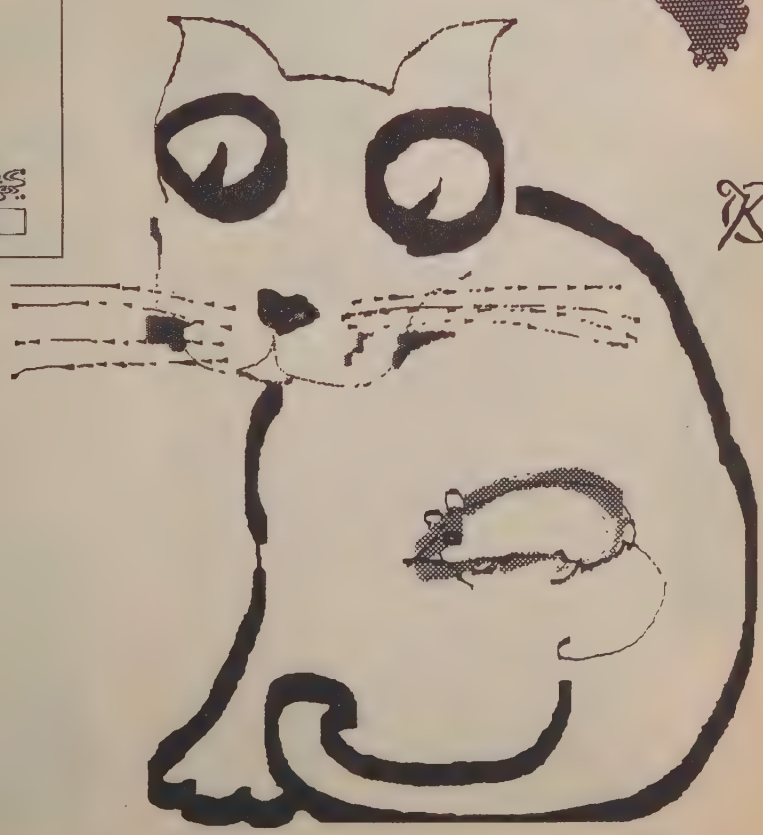
What is MacCalligraphy? 5 2

Different brush sizes, styles of stroke (Son, Gyou, Ten and Kai), touch and Washi (paper absorbency) give a great diversity of shape. Shades of grey, mixed on an inkstone with ink block and water, and wet or dry brush add texture.

A small view of the entire page on the screen allows greater use of the entire work surface.

There's even some rice paper to print out your finished work. If painting should become too stressful, click the teacup icon and be transported to the subtly changing garden scene for a moment's meditation.

—Kathleen O'Neill



IF COMPUTERS ARE THE WAVE OF THE FUTURE, DISPLAYS ARE THE SURFBOARDS.

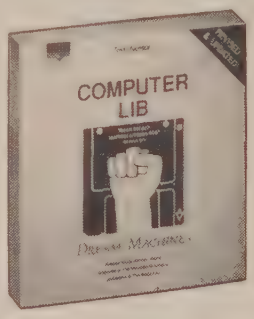
Computer Lib/Dream Machines

Ted Nelson started the entire genre of mainstream computer books in 1974 with a ***Whole Earth Catalog****-sized polemic called* ***Computer Lib/Dream Machines****. Like an Ace pulp science-fiction novel, it came in two halves, bound upside-down together. The "Lib" side was a tourist guide to available computers and the corporate politics behind them; the "Dream" side showed us evanescent innovations that (Nelson knew) would reshape everyone's lives. (One of these nascent innovations was "Hypertext" — in which text or pictures contain "links," or passages through which people can metaphorically leap to other information important to them. Nelson is the most prominent popularizer of this idea, which he has devoted much of his working life to developing, and which is now itself linked with various suddenly prominent programs like HyperCard and the forthcoming Lotus Agenda.)*

Now Nelson has voraciously updated both halves of his old book. The format is (a bit too much) old stuff updated copiously with brilliant new stuff. Amidst viciously well-targeted assessments of machines, metaphors, and manufacturers, you will be guided through hacker in-jokes and skilled pithy judgements. Nelson is sometimes justly criticized for quirkiness and self-indulgence; but he has an innate ability to judge the significance of particular technologies, shared by few other writers. He has, in this edition, also recreated what was then and is still the most fun-to-read computer book of all time.

—Art Kleiner

Computer Lib/ Dream Machines
Ted Nelson
1987; 330 pp.
$18.95
($20.95 postpaid) from:
Microsoft Press
Attn.: Consumer Sales
16011 36th Way/Box 97017
Redmond, WA 98073-9717
800/426-9400
or Whole Earth Access



The ALL-PURPOSE Machine

Computers are COMPLETELY GENERAL, with no fixed purpose or style of operation. In spite of this, the strange myth has evolved that computers are somehow "mathematical."

Actually von Neumann, who got the general idea about as soon as anybody (1940s), called the computer THE ALL-PURPOSE MACHINE.

(Indeed, the first backer of computers after World War II was a maker of multi-lightbulb signs. It is an interesting possibility that if he had not been killed in an airplane crash, computers would have been seen first as text-handling and picture-taking machines, and only later developed for mathematics and business.)

We would call it the All-Purpose Machine here, except that for historical reasons it has been slapped with the other name.

But that doesn't mean it has a fixed way of operating. On the contrary.
COMPUTERS HAVE NO NATURE AND NO CHARACTER,

save that which has been put into them by whoever is creating the program for a particular purpose. Computers are, unlike any other piece of equipment, perfectly BLANK. And that is how we have projected on it so many different faces.

The problem is not software "friendliness." It is conceptual clarity. A globe does not say "good morning." It is simple and clear, not "friendly."

IT'S ALL COMPUTERS

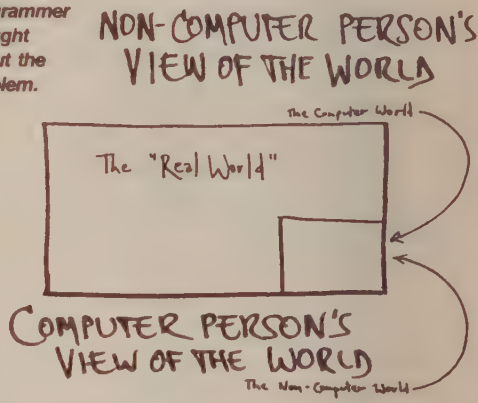
Somewhere inside almost every object, these days, is a little processor. Elevators, drink machines, gas pumps, the jammed cash register that just happens to be holding up your line—all have peculiarities based on how some programmer thought about the problem.

Release 1.0

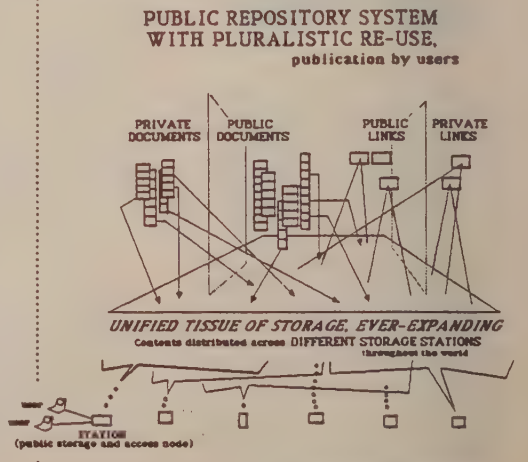
The most literate and informed writing on the technology of thinking comes on the gray, typewritten pages of this very expensive newsletter. For many of its subscribers, it's an unbelievable bargain. Instead of tramping to the computer industry's most tantalizing conferences, they can read Esther Dyson's personable reports, and soak up more than they would by being there. Dyson deciphers esoteric technical issues into oh-I-get-it! language, further refined by an impenetrable filter against PR hype. Moreover, she has an unerring nose for the significant consequence. Talk a library into subscribing.

—Kevin Kelly

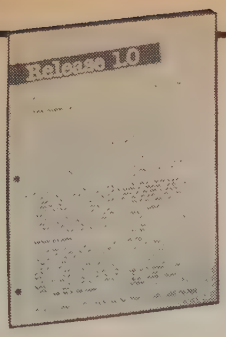
My favorite computer read is ***Release 1.0****, a pricey monthly from*


NON-COMPUTER PERSON'S VIEW OF THE WORLD
The Computer World
The "Real World"
COMPUTER PERSON'S VIEW OF THE WORLD
The Non-Computer World

My position on television is that television is movies that follow a slotted schedule. The time-slot decrees the nature of television just as surely as the time-slot decrees the nature of schooling in our current system.



From *Literary Machines* 87.1.



Release 1.0
Esther Dyson, Editor
$395/year
(12 issues) from:
EDventure Holdings Inc.
375 Park Avenue, Suite 2503
New York, NY 10152
212/758-3434

Esther Dyson, who writes with more intelligence per column than anyone else in the business — and with a high quaint humor. This sharp-eyed daughter of physicist Freeman Dyson treats the biz like a good field biologist might. She observes acutely, notes trends early, predicts boldly, and retains a wicked remote fondness for her obligingly complex subject.

—Stewart Brand

•

Ed Tufte teaches at Yale, where he is Professor of Political Science and Statistics, Senior Critic in Graphic Design, and Lecturer in Law. Despite all that, he is best known as the creator of *The Visual Display of Quantitative Information,* a stunning book that explains with illustrations how graphics can be used to elucidate rather than merely decorate or, at worst, obfuscate, quantitative data. Tufte is an ardent foe of "chart junk, simple data tricked up with three dimensions and six colors." Asked to comment on *USA Today,* he says politely that the weather map's not bad and then points out, "People think it's so successful, but what's the best-selling paper in the country? The *Wall Street Journal.* It's absolutely full of information, and no chart junk."

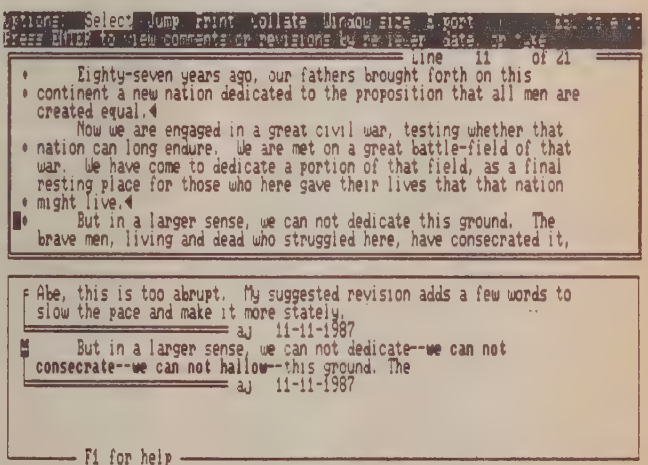
He is currently working for IBM as the corporate consultant on information design. "If you want the right skills to design a computer interface, don't go to a programmer, or a psychologist, or a graphic designer. Go to a mapmaker! Mapmakers are a magnificent combination of engineer and designer. They have a 5000-year history of visual craft. The map is an ideal model for interface design."

ForComment

Organizations write important stuff in groups. If you want to change a company policy, say, everyone will want to get into the act: one person drafts a proposal, then herds of interested parties will review the draft, scrawling marginal notes and suggested changes all over the original. ForComment controls that group writing/approval process elegantly. Each comment is carefully stored by contributor, recording each person's suggestions by date and initials in an audit/edit trail file, so you can go back later and reconstruct how the final document was put together. You even get to try out suggested changes without modifying the original to see how well that suggestion might work. ForComment is particularly useful when all parties are linked together by a local area network, but works quite well passing the annotated document around on a floppy disk.

—Richard Dalton

ForComment: Version 1.16. Not copy-protected. For IBM compatibles. **$295** from Broderbund Software Inc., 17 Paul Drive, San Rafael, CA 94903-2101; 415/492-3200.


Options: Select Jump Print Collate Window size Export
Press ENTER to view comments or revisions by reviewer, date, or site
Line 11 of 21
Eighty-seven years ago, our fathers brought forth on this continent a new nation dedicated to the proposition that all men are created equal.
Now we are engaged in a great civil war, testing whether that nation can long endure. We are met on a great battle-field of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live.
But in a larger sense, we can not dedicate this ground. The brave men, living and dead who struggled here, have consecrated it,
Abe, this is too abrupt. My suggested revision adds a few words to slow the pace and make it more stately.
aj 11-11-1987
But in a larger sense, we can not dedicate--we can not consecrate--we can not hallow--this ground. The
aj 11-11-1987
F1 for help

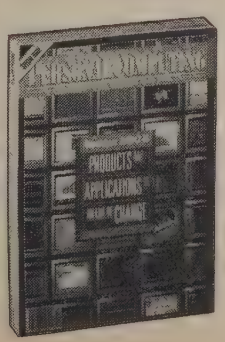
ForComment's Review menu screen.

Personal Computing Magazine

Only a couple of years ago this was a contemptible piece of advertising-driven fluff. Now it's a reliable and (mirabile!) *interestingly written general-interest computer magazine. The only one left, in fact, that covers Apple, IBM, and other computers together without getting lost in trivia, vagueness, or industry in-groupiness. To find that such a magazine could still exist after the Balkanization of computerdom was downright refreshing — and I find myself WANTING to read* ***Personal Computing*** *more than any other computer magazine.*

—Art Kleiner

Personal Computing
Fred Abatemarco, Editor
$18/year
(12 issues) from:
Hayden Publishing Company, Inc.
10 Mulholland Drive
Hasbrouck Heights,
NJ 07604
800/525-0643



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How can a manager know if fax, and PC fax specifically, is appropriate technology for his office? "If they send out three or four overnight mail packages every day, they probably should look at fax," says Stanley R. Greenburg, a New York publisher who has compiled a directory of fax telephone numbers, "The Official Facsimile Users' Directory," (published by F.D.P. Associates).

•

10 Hidden Costs of Personal Computing
1) Disks 2) Software upgrades 3) Technical support 4) Printer ribbons 5)Laser-printer toner cartridges/consumables 6) Training 7) Cables 8) Hardware upgrades with add-in boards 9) Equipment repair/maintenance 10) Time.

•

Q: *What can I do about an employee who has become so enamored with his personal computer that he neglects his assigned duties in favor of helping others in the department with their personal computer problems?*

A: Cherish him! In addition, change his assignment from whatever it was before so he only has to do half of that, but add on top of that the formal duty to help the other klutzes who work for you. You may pull your supervisory rank and put helping *you* out on top of his priority list.

Philanthropy is too often a fickle matter, a fuzzy decision which doesn't want to be made entirely by financial equations, nor entirely by the gut, and so is usually made by neither. Giving becomes treacherous as a result. To reduce the hazards of giving, and to increase its innovation, a group of philanthropists has been meeting for several years under the collective name of Threshold, to mutually explore unorthodox manners of using wealth. For the group's use, Drummond Pike compiled a distillation of giving-wisdom from his decade as a grant evaluator for the Tides Foundation ($1 million in grants last year). It has the invigorating air of sound small-business advice. Read inside-out, these reversible guidelines illuminate what a winning grant request should represent. —*Kevin Kelly*

HOW FOUNDATIONS DECIDE WHO GETS THEIR MONEY

BY DRUMMOND PIKE

illustration by James Donnelly

AS YOU COLLECTIVELY embark on the process of evaluating this year's crop of proposals, I thought it might be useful for me to attempt to put into words my casual, and very subjective, "toolkit" for grants evaluation.

1. The Five-Or-Fifty Rule: If a grant will end up being either less than 5 percent of the recipient's budget, or more than 50 percent, the role of the grant should be examined more carefully. If less than 5 percent, what really is the grant financing? Would the group be seriously hurt if they didn't get it? If the grant will comprise more than 50 percent of a group's budget, is the foundation willing to accept the responsibility? What will happen with next year's funding?

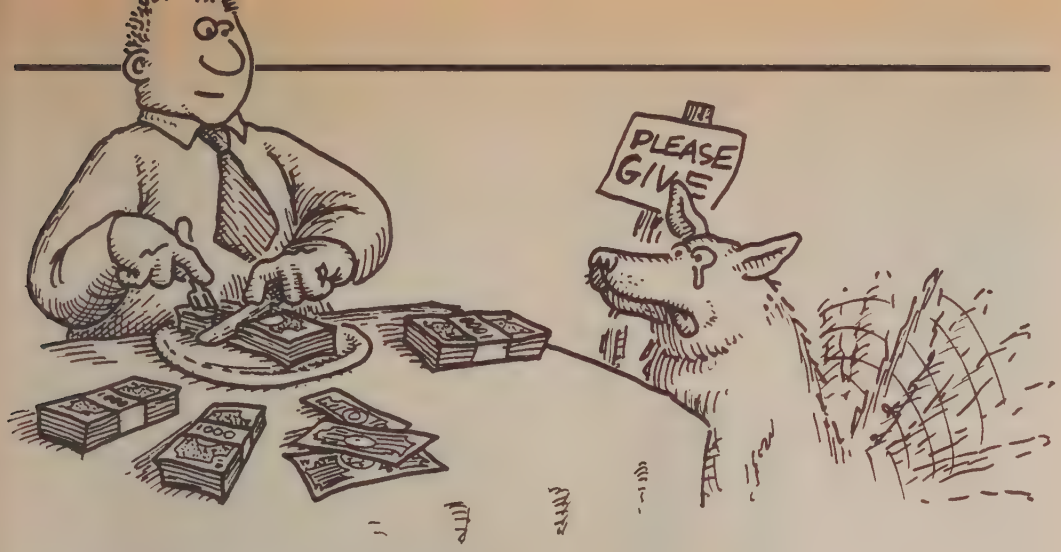
2. The 33% Self-Support Test: If an organization sees itself as an ongoing entity, one that expects to exist for a number of years into the future, they should have significant support from sources other than big grants ($1,000 or more). Such large gift sources are impossible to predict, so much so that the group's stability will depend on other sources (earned income, net income from direct mail, memberships, or grassroots fundraising). One-third is a lot to require, but if they have it, you know they will be safe.

3. The Six-Months'-Money-In-The-Bank Test: This is one of my favorites, for it goes to the core of managing a nonprofit. It is also one of the hardest tests to pass. But the fact remains that for organizations, as opposed to one-shot projects, having six months' money in the bank demonstrates excellent management, conservative financial practice, and certainty of a future. It disgusts me that some grantors view such a situation as indicative of a lack of need for the cash; such an attitude promotes paternalistic relations between grantor and grantee, among many other negatives.

4. The Five-Year Cycle: New organizations frequently go through a five-year cycle at the end of which there is almost invariably a difficult period of adjustment which determines whether the effort will institutionalize or die. Year One is the toughest — startup mania, often with very little money. Year Two, if you get that far, is the ascendant stage; suddenly you are of interest to foundations and supporters, your new ideas are getting attention, and the money starts to come in. Years Three and Four are the easiest; the ideas you have are more than interesting — they are hot, your presence is being felt in your chosen field, and grants are easier to obtain and you can begin to build a reserve against the dry times instead of having to go on unemployment while you wait out that next grant. Year Five is almost always hard; your ideas are becoming accepted and thus are less interesting to funders, you either quit or want to or should, with the result that the organization is going through its first major staff transition, or through its first tough internal conflict. *In considering a grant, think about where the organization is in its development cycle.* My model is sort of an archetype with infinite variations. But every group goes through development stages something like those I've outlined, each of which has a profound impact on the potential for the group's success.

5. Board Meeting Test: This is more important than it may seem at first. Ask when the board last met, and ask to see an agenda. If the board didn't meet in the most recent six-month period, ask why. With organizations where the board does not meet (or where, when it does, it is only for limited purposes), you know the staff operates without effective accountability. This is not necessarily bad. It just

If the staff comprises more than 50 percent of the Board, watch out.



means you have to place greater importance on the evaluation of the staff. And you cannot expect that deficiencies will be easily rectified. You also have to trust the staff implicitly. An important adjunct test is to find out if the staff comprisees less than 50 percent of the Board; if not, look out. And if there are a number of staff people on the Board, be sure to check out the Executive Committee.

6. Staff Turnover Test: Find out how many staff left their jobs or were fired in the most recent year. If it's a significant portion, probably a bit of bad karma lurks in a corner.

7. Organizational Taxonomy: It may seem a silly exercise, but think about there being several different types of organizations:

a. One-Shot Projects, such as films, campaigns, or short-term research projects.

b. Issue Groups, which come into existence to address a specific concern, and which will be around as long as the issue.

c. Process Groups, which come into existence to promote or facilitate the use of some specific knowledge, method, or technique (such as dispute resolution).

d. Institutions: big, long-lasting, assumed to be necessary by some constituency.

8. The Smelling-and-Listening-and-Looking Test: Try to go see the people at their place of business. Find out if the phones ring, if the people talk and smile at one another, and if the place smells busy. See if they talk TO you or AT you. And find out if they can make a cup of coffee or tea; if not, you might wonder how much time people really spend there. And take a friend who can tell you what really happened while you were there talking.

9. The Talk-To-Someone-Else Test: Probably the least-imposed test by grant investigators; make yourself talk to at least one of the following: a disinterested board member, a reporter who knows the group, the director of a competing organization, the leader of the opposition (if there is one), or anyone else who can act as a third-party observer for you. The dynamic of grants evaluation and investigation is irreconcilably skewed and affected by our cultural obsession with money; third parties can help validate our perceptions and help us work around the inevitable inequities between the role of applicant and that of the gatekeeper to the money.

Rules Of Thumb:

- Go with your intuitive judgment (100 *nos* to one *yes*).
- It's a weighty process with much negativity in it, which can constrain you. Stay light.
- A good foundation is more of an organic process than a rigid outcome.
- You are choosing a small number of grants from a large number of applications. To limit the number of proposals, narrow or focus the categories. The task will become more difficult as you attract more diverse proposals. What do you want the winnowing process to produce? What kinds of grants do you want as your result?
- Don't feel obliged to finance a total budget.
- Look for thoughtful levels of discussion, merits of projects.
- Stay aware that there is other work besides the money game, but don't use that as a way of replacing monetary compensation.
- Don't be afraid to say no.
- A challenge (conditional) grant is good to make if there is unsureness.
- By fully funding an organization, you may limit their interaction with their own community and prevent them from getting further grants from that community.
- What an organization has done defines it more than what they promise to do.
- When is the grant coming in the timing of the organization? Between three and six years is a difficult time, like adolescence.
- Ideal amounts are from twenty to fifty thousand, plus a pot to call on for quick grants. ■

Where the Money Is

Helen Bergan was asked once too often to supply "Who's Who in Philanthropy" for patrons of the public library where she works; the mythical title could not be found, but she knew the search for rich people by fundraisers would go on and on, and the need for a guide through all the possible resources would not go away. So she wrote this one. It's like having a librarian at your elbow as you look for your very own philanthropists. She tells you where to look and where not to bother looking, and includes information on computer-accessible databases as well as books. —*Bonnie Jo Dopp*

Where the Money Is
Helen Bergan
1985; 101 pp.
$12.95
($13.95 postpaid) from:
BioGuide Press
P. O. Box 16072-E
Alexandria, VA 22302
703/820-9045
or Whole Earth Access

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Out of a total of over $60 billion given to philanthropic causes in 1982, the lion's share, almost $49 billion, was given directly by living individuals.

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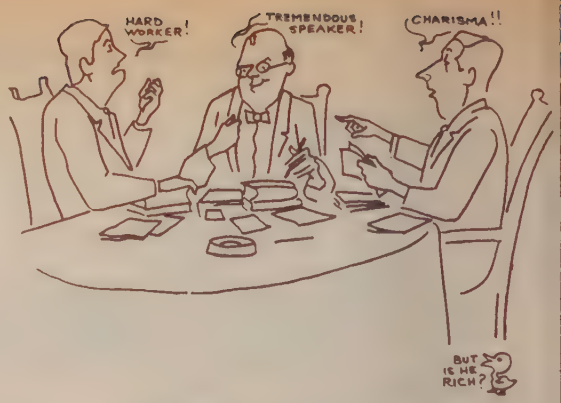
If your first candidate for a [philanthropic board member] declines, it is a good idea to involve that person further by asking recommendations for someone else to serve in a needed capacity.



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Finding out information on a person's wealth through access to real estate directories may sound sneaky, like an invasion of privacy, but these records are public documents and it is easy to gain access to them. They are published for any number of reasons. Your use of them to find wealthy donors is an appropriate use for the materials. If the public library does not have copies of these city assessment books, ask there where you may find them.

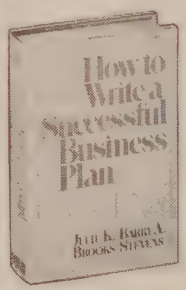
•

It will come as no surprise that if a person can be identified as giving to one charitable cause, he or she may give to another. Check the donor or patron lists on symphony and theatre programs. Take a good look at letterheads mailed out from other non-profit groups in your area. Many list their prominent sponsors. Call these groups and ask for a list of their board of directors. Such information is easy to obtain.

How to Write a Successful Business Plan

Writing a business plan is very difficult and consuming. There are no shortcuts, no easy paths. That being the case, you might as well get a book as comprehensive and thought-out as this one to assist you. —*Paul Hawken*

How to Write a Successful Business Plan
Julie K. Brooks
and Barry A. Stevens
1987; 231 pp.
$17.95
postpaid from:
American Management Association
P. O. Box 169
Saranac Lake, NY 12983
518/891-1500
or Whole Earth Access



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The Best Way to Get Funded
We asked the respondents to rate the various sources of funding on a scale of 1 to 6, with 1 being the most effective and 6 being the least effective. The average rankings obtained were as follows:

Venture capital	2.89
Sophisticated investors	2.89
Family	3.51
Current employer	3.66
Bank loans	3.76
Other companies	4.11

Venture capital and sophisticated investors were ranked as the best ways to obtain funding, yet our other data showed that these sources reject a high percentage of plans — even if they have solid referrals. Although bank loans were ranked relatively low, many of the successful founders with whom we spoke have bank loans in their portfolios.

•

Executive Summary
The executive summary, a concise summary of the business plan, is critical to its success. You must be able to describe the product and its market opportunity in summary form if you want the remainder of the plan to be reviewed. The summary should include:

- A brief background on the founders
- A short description of the product
- A short market description
- Key financial data, including the amount of money you need and how it will be used.

Selecting an audience: motives and information needs.

The Audience	Motives	What it wants from the deal	What information it needs
Venture Capital firm, SBIC, individual investor	Profitable investment	Return on investment	Standard plan
Referral sources: accounting firms, law firms, financial planners	Aid to their clients and associates	Fees, chance of additional work	Standard plan
Funded companies	To help others	Satisfaction, credibility	Standard plan
Limited partnerships	Investment, tax advantages	Return on investment, lower taxes	Standard plan, tax emphasis, revenue potential
Your employer	Improve sales, market share, company value	Improved sales, market share, firm value, better image	Standard plan, less on founders, more on product, market
Current or potential	Get a good product that	Lower price prestige, equity,	Information on product, founders,

Beyond Our Means • Left Business Observer

Do you suspect that the U.S. economy is going to hell in a handbasket? You are not alone. Here are two voices with different perspectives that point in the same direction.

When extremists predict cataclysm it's nothing new, but when a spokesman for the establishment does, it's time to listen. Malabre is economics editor for the ***Wall Street Journal****, and his establishment roots sometimes show, as in his defense of continued military spending. But his thesis, pithily condensed in the title* ***Beyond Our Means****, is less orthodox. He says that individuals, the government, and the third world, after decades of deficits, are so far in the hole that a crunch is inevitable. His scenario for that crunch begins with a recession which in turn triggers leaks in the massive balloon of debt. Bankruptcy courts and unemployment offices boom, but the rest of us pay the price for overindulgence.*

While such predictions of The End are common these days, Malabre's view of the specifics is unique. He advances three possibilities and estimates their probabilities. Hyperinflation of the kind that devastated Germany in the '20s is seen as a 20-percent possibility. Deflation such as we knew in the Great Depression is seen as a 30-percent shot. That leaves his 50-percent scenario, which is new — intense government regulation, i.e., they'll change the rules in the middle of the game. New taxes and banking regulations, import curbs, and finally the joker — a legal default on government debt that will keep Washington operating while other institutions bite the dust, leaving the hired help to fend for themselves. If it happens, the best place to survive financially would be the underground economy. The best tactic now is to get out of debt and build up cash reserves, a painful process based on delaying gratification. The book is chilly reading that will open your mind.

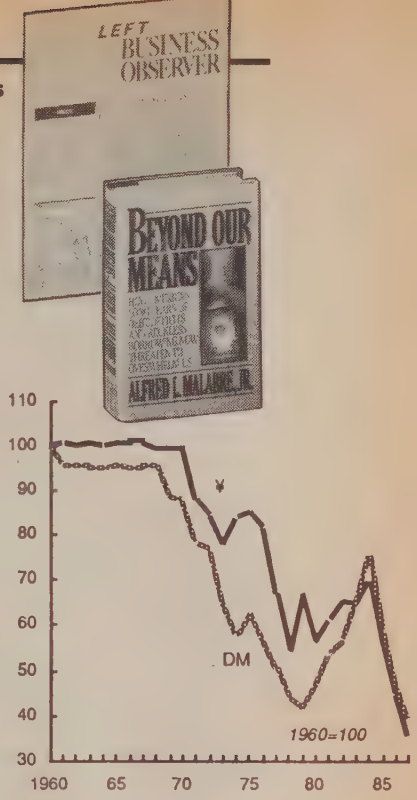
A nation's economic system is basically nothing more than the way the people in power divvy up the pie, whether it be for the benefit of the rich (generally themselves) or the poor (unlikely, but possible). Obviously the study of economics can lead to political insights, but unfortunately economic news has little pizzazz and important events often lie buried in the back pages of the ***Wall Street Journal*** *and other, even stodgier publications. How many of us have time to ingest these pounds of dreary printed matter?*

Left Business Observer *can assist. The author was a right-wing Yalie until Watergate cleared his mind, then he went on to a Wall Street job and became a self-taught economist thru voluminous reading. He plows thru impressive quantities of journals, papers and books which are then condensed into a monthly newsletter. His perspective has neither the professional optimism of the mainstream publications nor the doomsday gloom of the survivalist economists, but his analysis of Washington policies cuts thru a lot of bombast and fog.*

—Dick Fugett

Beyond Our Means
Alfred L. Malabre, Jr.
1987; 174 pp.
$6.95
($7.95 postpaid) from:
Random House
Attn.: Order Dept.
400 Hahn Road
Westminster, MD 21157
800/638-6460
or Whole Earth Access

Left Business Observer
Douglas Henwood, Editor
$15/year
(11 issues) from:
Left Business Observer
250 W. 85th Street
New York, NY
10024-3217
212/874-4020



The U.S. dollar versus the Japanese yen (Y) and the German mark (DM), indexed to 1960 = 100. Source: IMF market rate series.
—Left Business Observer

When the American economy emerged from [World War II], there were a number of strong and unusual incentives, legislated years earlier, that spurred Americans to spend rather than save. Among the most powerful of these was a provision allowing homeowners to deduct mortgage-interest payments from their income for tax purposes, deductions which most major countries did not allow. . . .

Tax regulations encouraged other sorts of spending as well. In the U.S., in contrast to many other countries, the interest expense of anything bought on credit — cars, refrigerators, furniture, power boats — could, until the latest law, be charged against income. Thus, borrowing often made far more sense than saving, and so the spending binge continued. . . .

Our declining ability to keep up with international competition in recent years seems due in part to our dismal level of personal savings. Savings, after all, provide capital for industrial growth and modernization, which in turn enhance productivity. Ultimately, much of the blame rests with a U.S. tax system that has spurred borrowing through overly generous deductions and then has discouraged saving by taxing it twice — once when the money is earned and again when it produces income in a savings account or other interest-bearing or dividend-yielding investment.

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My guess is that government debt will be repaid — and the deficit effectively erased — in a manner tantamount to default or confiscation. Holders of Treasury securities coming due may be told, for instance, that unless their bills, notes, or bonds are rolled over, Uncle Sam will pay only a specified fraction of face value. Interest payments on such securities may also be capped. This would amount, of course, to repudiation of a large part of the federal debt and would require legislative action. But that could come swiftly under such dire conditions.

—Beyond Our Means

•

New York. On December 14, the Bank of Boston wrote off $200 million of its Third World debt, and put much of the rest of its $1 billion portfolio on non-accrual status. In plain language, they declared 20% of these credits worthless, and the rest of dubious and declining value. . . .

Which leaves the money center banks in a difficult position, to say the least. Since their Third World portfolios are far larger and their financial structure far weaker than the regionals, they are in no position to follow the Bank of Boston. There will be fewer contributors to the endless rounds of debt restructurings — those sophisticated transactions whereby new money is lent to cover interest past, present, and future. But the banks must continue lending new money after bad, in order to avoid having to write off the loans. *—Left Business Observer*

Breaking into the Boardroom

After five years in the aerospace industry I found myself respected for my hard work, creativity, organization and helpfulness, yet not given a promotion. This book explained why and opened my eyes to personal negotiation, power, and other matters that Peter Drucker's famous management books failed to clarify. Aimed at women (originally titled ***Why Jenny Can't Lead****), it has much to say to men too. The authors run seminars on the subject; bet they're good.* —*Leonard Cuff*

I haven't seen a more explicit summary of how power is consolidated, wielded and guarded within the tribal male society of politics and business. Essential Machiavelli. —*Kevin Kelly*

Breaking into the Boardroom
Jinx Melia
1986; 179 pp.
$14.95
($16.45 postpaid) from:
Putnam Publishing
P. O. Box 506
East Rutherford, NJ 07073
800/631-8571
or Whole Earth Access

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The person of greatest value is the one who overcomes the obstacles to get the goal. (This is, by the way, what men mean by "working hard." Women often interpret "working hard" to mean putting in time.)

The employee, male or female, who complains about the obstacles and wants them eliminated is similar to the tennis player who wants to get rid of the net.

•

There is no single action more powerful than taking blame, in return for, of course, favors. . . .

Ron was a middling professional in a fast moving corporation where his boss was in charge of a very expensive program. It became clear the entire project was a waste of funds, headed for very visible failure. Somebody's head was going to roll. Ron's boss, Al, had three children of college age and didn't want to be the scapegoat. So he asked Ron to take the blame, in return for which . . . Well, Ron had always wanted to attend law school. So Al arranged a full expense fellowship for his subordinate by cashing in a few chips with acquaintances on the university board. Ron confessed his failure, was allowed to resign with reprimand, entered law school, and was rehired by Al three years later when he had his degree.

•

The currency most valued by high risk power brokers is loyalty. There is a significant difference in our society between female and male loyalty. Women generally operate with what we call "marriage" loyalty. We will be loyal for ever and ever and ever, but only on condition that . . . (With us making the conditions). Men are more apt to use "football" loyalty; they will be loyal unconditionally, even unto death, but only today. Tomorrow the loyalty must be renegotiated. The guard for the Washington Redskins gets paid to protect his quarterback. But the day he gets traded to the Dallas Cowboys, not only does his loyalty go to Texas, so does the Redskin playbook.

NELSON'S BRAKES
FREE ESTIMATES

BRAKE SERVICE
WHEEL ALIGNMENT
WHEEL BALANCING
CLUTCH WORK

637-1010
9806 Candle Road
Petersburn

OLD AD ... it pulled many calls, but few jobs.

NEW AD ... it pulled fewer calls, but most of them became jobs.

When QUALITY is your first concern, call....
NELSON'S BRAKES

• We use the finest materials
• Our workers are factory trained

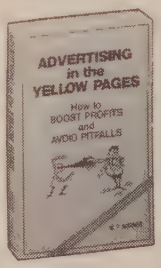
BRAKE SERVICE
WHEEL ALIGNMENT
WHEEL BALANCING
CLUTCH WORK

"My rates may be a bit higher, but what's a few dollars when your life is at stake?"

637-1010
9806 Candle Road
Petersburn

Advertising in the Yellow Pages

This is a helpful book if you are considering advertising in the Yellow Pages (and for some businesses it's essential), or if your Yellow Pages advertising has not been successful. One message of this book seems to be that the Yellow Pages work in spite of the Yellow Pages. There are pitfalls galore, not the least being the disreputable and/or incompetent salespeople who sell Yellow Pages advertising. Mr. Wagner has made a career of this small but important area, and his book covers just about everything on the subject. —*Bernard Kamoroff*



Advertising in the Yellow Pages
W. F. Wagner
1986; 174 pp.
$12.95
($14.95 postpaid) from:
Harvest Press
15237 Sunset Boulevard
Los Angeles, Ca 90272
213/459-3824
or Whole Earth Access

•

Of the buyers who start out looking specifically for you, almost one-half may end up doing business with another firm because (1) they cannot find you, or (2) they succumb to a competitor's advertising if it is more visible or persuasive or contains more information.

•

Step #1 [in designing an ad] is to create "The Look." The Look you want to create is one that will grab the eye and hold it. The reason for this is *"Where the eye stops, the sale begins."*

This...

PHOENIX SALES COMPANY
NAME BRAND FURNITURE
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Rule #1 Use as few words and lines of text as possible. This will permit you to double the type size and make it bolder. The result is a more eye-catching, readable message.

Rule #2 Vary type sizes and styles and lengths of lines.

Rule #3 Use bullets or asterisks to set off different ideas.

The Unabashed Self-Promoter's Guide

The value of your product, service, or cause will communicate furthest when wrapped around the image of a person. In many cases that will be YOU, and self-promotion will be necessary. Self-promotion dispensed at the levels recommended by this mildly cranky book will be self-destroying for most people. But taken in small doses, the strategies herein will clear up the mystery of fame. —*Kevin Kelly*

■

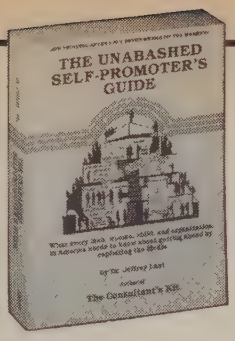
As you develop your image you must keep in mind the following critical facts:

• Subtlety is beyond the power of the public. When dealing with the public, you must always present yourself in the least complicated fashion and with no more than one leading idea. To do more is to risk accomplishing nothing.

• Likewise, the media cannot comprehend complexity. Thus all those dealing with the media must present themselves in the most simple, uncomplicated, direct fashion possible. In the media all ideas, all images are weakened if they deviate from the necessary standard of profound simplicity.

• You cannot afford either to worry or despair about the fact that your image is not the whole you. It never can be, never will be.

The Unabashed Self-Promoter's Guide
Dr. Jeffrey Lant
1983; 366 pp.
$30
($32.50 postpaid) from:
Jeffrey Lant Associates, Inc.
50 Follen Street, Suite 507
Cambridge, MA 02138
617/547-6372
or Whole Earth Access



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Never, never fail to inform media people — or anyone else, for that matter — what your image is if they have not figured it out for themselves.

■

Most organizations, whether the local Kiwanis, Knights of Columbus or PTA, are hard up for good speakers. Members constantly lament the tedium of the speeches they are forced to hear. Most lavish excessive praise on efforts which by any standard are mediocre. Thus, take heart! If you are bad, with thin content and abject delivery, you will be no worse than what they've already heard, and will quickly be dumped into the grateful darkness of oblivion. If you are anything other than bad, you will be remembered as the closest thing to silver-tongued Cicero who has ever graced their podium.

Competitor Intelligence

A comprehensive guide to sources and methods of gathering intelligence when the target is a business. Designed to help corporations forecast and x-ray their competition, this manual would be just as helpful to environmental groups investigating polluters, unions estimating employer profits, or peace activists studying military contractors. Countless lists of references and information contacts, with addresses and phone numbers. Tips on creative investigation techniques (nothing illegal). Illuminating discussion of how economic activity produces information that flows, pools, leaks and decays. More tools and ideas than you can shake a corporate structure at. —*Robert Horvitz*

■

Dynamism. This factor states that the more dynamic and actively growing an industry, the easier it is to get the intelligence you are looking for. Yet you will also find that along with the information you receive, you also encounter accuracy problems. . . .

Regulation. The more regulated the industry, the higher the intelligence access for any one company. Translated into more basic terms: The more companies have to account for their actions to a governmental authority, the more information they will disclose about their activities.

■

Intelligence-gathering's most fundamental rule:

Whenever money is exchanged, so is information.

■

Public data does not necessarily mean published data. . . .

There are other sources [of intelligence] that are also publicly available, yet are not found in published form. They include telephone interviews, counting the number of parking spaces in a parking lot, and attending a trade show. All the intelligence you discover about your competitor through these nonpublished sources is still valid intelligence and is very much in the public arena.

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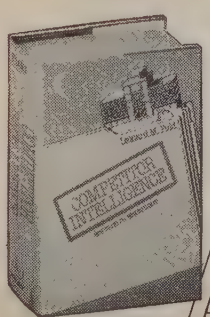
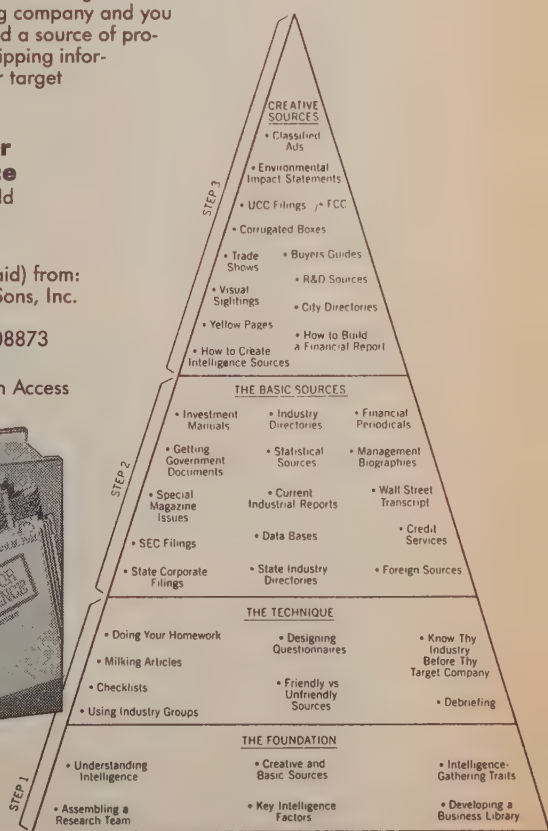
Check to see if your target company uses an independent trucking fleet. Many smaller manufacturers cannot afford to maintain an entire fleet of trucks. Here is where truck leasing can play an important role in your search. Like corrugated boxes, rented trucks are another incidental intelligence source. Find the leasing company and you may have found a source of production and shipping information on your target company.

Competitor Intelligence
Leonard M. Fuld
1985; 479 pp.
$24.95
($29.90 postpaid) from:
John Wiley & Sons, Inc.
1 Wiley Drive
Somerset, NJ 08873
201/469-4400
or Whole Earth Access





The intelligence-gathering pyramid

Price Club.

Wholesale Warehouse Clubs

Disintermediation — a financial technical term which means cutting out the middleman — has moved from bond and mortgage sales into retail consumer sales. Mobs of shoppers have followed.

The typical wholesale club is a mammoth hangar-style building, large enough to park a jet in, that is stacked to the ceiling with pallets of goods on steel shelving — the usual wholesale decor. Forklifts beep across the floor, lowering pallets to ground level.

You, as member, cruise between aisles loading oversize containers of household supplies (at wholesale prices) onto flatbed dollies or jumbo shopping carts. The disintermediated prices run about 10 to 12 percent above manufacturer's price, which can be 30 percent cheaper than a discount store's, not to figure what it would save you from the list price. Membership generally costs about $25 per year, restricted to "businesses," in order to insure a "select clientele." You can usually find a way to get a membership, and pay for it in savings from two trips.

Everything is sold in wholesale packaging: gigantic cartons of tissue paper, cafeteria-size jars of relish and salsa, camera film in bulk display packages, shrink-wrapped hunks of lined writing paper, hefty industrial tools, cleaning supplies by the institutional gallon, and so on. Selection is limited to what comes from the factory at a good buy that week. You have one choice per item, promoting a shopping strategy the owners must love — if you see something you might need, grab it, because it probably won't be around next time.

Price Club (in San Diego) was the originating store. It has copied itself across the country 37 times, and has 75 imitators. Increasingly the spinoffs are specializing, offering wholesale office supplies, home building supplies, or sports equipment. If you are operating a small business, or running a large household, there are substantial savings here. Look under "Wholesalers" in the phone book, or try these names: Price Club, Office Club, CostCo, Save Club, SportsClub.

—Kevin Kelly

That's A Great Idea!

Here's yet another book on how to wend your booby-trap-strewn way from wonderful idea to wonderful sales. If entrepreneurial urges surge in your psyche, you can't read too many of these books — there is no one right path to success. But there are lots of opportunities for disaster. Many of these pitfalls are embarrassingly common, so it'll pay you to read up on the subject. This book is also good at getting you started, especially if you don't really regard yourself as an inventor. Lots of useful tricks in here too, such as how to dress for an interview. Unlike competing books, this one isn't afraid to consider ideas for schlock products. You know, the awful ones your kids want. *—J. Baldwin*

That's A Great Idea!
Tony Husch
and Linda Foust
1986; 228 pp.
$9.95
($11.65 postpaid) from:
Gravity Publishing
6324 Heather Ridge
Oakland, CA 94611
415/339-3774
or Whole Earth Access

•

Reducing your idea to a model or working prototype is critical. It proves that the concept is workable and helps you make improvements in function or design that you might never have known were necessary. It is far better and cheaper to find out about glitches and miscalculations while making one sample of the product rather than after having geared up to make several thousand of them.

Having a prototype will also aid in market research and in defining your target group of consumers. It is much easier and more reliable to determine people's reactions to a product when you can show them an actual sample, rather than just describing it to them. You can find out their opinions of specific features and why they would or would not buy it.

•

Be wary of positive responses to the question, "Would you buy it?" They may only be indications of curiosity or attempts to spare your feelings. Therefore, also ask questions such as: What benefit does it provide? What need does it fill? What do you like or dislike about it? Does it solve a problem? Answers to these questions more reliably predict consumer interest and willingness to buy.

Conversely, negative responses to the would-you-buy question *are* reliable. Therefore, market research is most reliable for predicting failures, not successes. It can help you avoid disasters, but it will not guarantee winners.

•

Response to Expect from Companies

Management is usually quite concerned over the legal problems associated with unsolicited ideas. Because of the possibility of someone unjustly claiming misappropriation of a trade secret, most firms are extremely reluctant to consider product ideas from external sources. Therefore, you may receive a letter requesting a signed submission agreement and waiver of confidentiality.

Misunderstandings can easily arise. If a company is already working on a new product, it would not want to pay an outsider for the same idea. An inventor who does not know about such prior research and development might see a company successfully introduce "his" product several months after his submission. If he thought it was derived from his idea, he might assume it was stolen and bring a lawsuit. Even if both parties were acting in good faith, there is still a messy dispute to be resolved.

As a result, some companies often refuse to look at *any* unsolicited ideas whatsoever. They will send you a polite form letter stating their policy, and that will be the end of your correspondence.

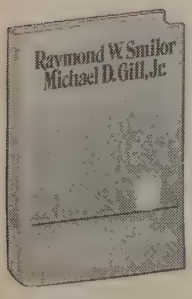
The New Business Incubator • Incubators for Small Business

Small businesses are this decade's golden goose. The several million small businesses (20 employees or less) hatched each year are responsible for the majority of the innovations released commercially in this country. They provide most of the new jobs, too. For example, small business collectively generated 100 percent of the net new jobs in America between 1980 and 1982. Yet nearly half of these fledgling companies bite the dust before they are five years old, devoured by the wolves of undercapitalization and poor management.

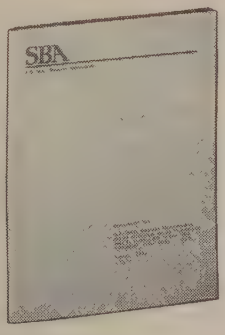
To boost their survival rate through the critical years, some small businesses are tucking themselves under the wings of a business incubator. The typical relationship: an institution 1) takes a vacant warehouse or old factory, 2) divides up the interior into affordable spaces with a climate supportive of start-ups, 3) pools services like receptionist, xerox, janitor, and access to consulting expertise, and 4) then rents it to embryonic businesses.

There are several hundred business incubators operating around the country so far. Although not confined to hi-tech companies, the whole concept emerged to advance the dismal success rate of small companies which were formed to transfer technology from research centers to the marketplace, but were croaking too often. Small business incubators have helped some of these. The jury is still out on how effective they are overall, and even whether this meta-business of nurturing young businesses is merely another dying goose, or a golden egg.

***The New Business Incubator** delves into the principles of organizing a start-up business incubator. The ''Incubators for Small Business'' pamphlet from the Small Business Administration is the route to finding the location of an existing one.* —Kevin Kelly



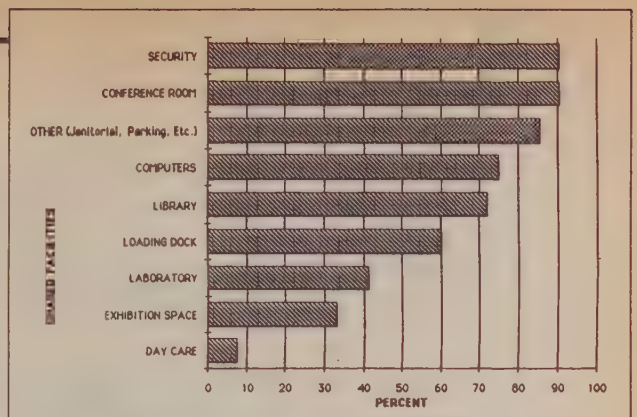
The New Business Incubator
Raymond W. Smilor
and Michael D. Gill, Jr.
1986; 199 pp.
$19.95
($21.95 postpaid) from:
D. C. Heath & Co.
Lexington Books
125 Spring Street
Lexington, MA 02173
617/862-6650
or Whole Earth Access



Incubators for Small Business
free from:
U.S. Small Business
Administration
Office of Private
Sector Initiatives
1441 L Street NW
Room 317
Washington, DC 20416
202/653-6600

■

In Paoli, the facility is a converted schoolhouse, the main part of which dates from the 1920s. . . . The center provides a variety of spaces. Most of the large classroom spaces in the school have been divided up. The space available starts at about 150 square feet for a small office. The offices of this size are rented out with a desk and chairs, so that a small company can easily move into a furnished office with the central receptionist of the incubator answering all phone calls and fielding all visitors.



Services Provided by Incubators—Shared Facilities

—The New Business Incubator

The facility also offers a few spaces that are 600 square feet and two or three at about 1,200 square feet. The large school auditorium can be used, at least initially, by any of the companies for presentations or training films. To make the auditorium income-producing, an effort is being made to find a small theater or film company that could take full advantage of the space. The Paoli center also has a gymnasium in which several health clubs have expressed an interest. *—The New Business Incubator*

The Garage Sale Handbook

Assiduous attention to these tips will likely raise your garage sale from penny-ante amateur level to money-making pro. In fact, the book ends with what you'll need to know to start a garage-sale business. Unlike many sales I've been to, the information is straightforward and mercifully free of the sappiness one often finds accompanying this sort of thing. —J. Baldwin

The Garage Sale Handbook
Peggy Hitchcock
1986; 63 pp.
$3.95
($4.95 postpaid) from:
Pilot Books
103 Cooper Street
Babylon, NY 11702
516/422-2225

■

Do not attempt to hide or conceal the fact that something is not working. Be honest no matter what. If you don't sell it, at least you'll be able to sleep at night. If it is totally a lost cause, trash it. Don't waste valuable display space with items that will not sell simply because they have absolutely no value at all.

■

If you spend 10 minutes thoroughly cleaning that mixer, you are sure to realize $2 to $3 more than if it's caked with Bisquick and has that black grease around the base. That averages out to $12 to $18 an hour for your labor. Really, it's going to pay off and then some. Again I implore you, if you have kids, put them to work.

•

You might want to keep a tape measure handy on the cash station table. Someone will probably want to measure a little table to see if it will fit between the refrigerator and the cupboard, and will have forgotten to bring their own tape.

GETTING OVER THE INFORMATION ECONOMY

INTERVIEW WITH LESTER THUROW
BY JAMES WALSH

One mark of the originality of economist Lester Thurow's thinking is that he has been rejected by nearly every stripe of political daddy-o who would champion an economic theory into national policy, while still gaining the respect of other economists as Dean of the Sloan School of Management at MIT. His influential book The Zero-Sum Society *(1980) anticipated most of the economic patterns we're now seeing — a national economy headed into slow growth, with ensuing political paralysis, and an interconnected global economy that doesn't allow the lie that some can gain without others losing. He was interviewed by James Walsh, staff writer for* California Business *magazine, where this appeared in a slightly different form.* —Kevin Kelly

We are in a global economy where productivity, rather than information, propels growth.

Looking at the American economy today, what do you see?

THE biggest change that is facing Americans today is that the American Economy has died. There is no American economy; there's a world economy. There are several ways that people react to this kind of dramatic change. The first usually is denial. Last February, President Reagan said something that made me want to stand up in my living room and "cheer." What he said was that Americans can outproduce, outmarket and outsell any nation in the world. In 1986 we had a hundred-and-sixty-billion-dollar trade deficit.

After that, you go through the "unfair" stage. Remember those ads by Motorola and Bethlehem Steel in the magazines and newspapers? They said: "All we want is a level playing field. If we have a level playing field with the foreign competition, we'll be okay." I assure you that Bethlehem Steel doesn't want a level playing field with Nippon. Nippon gets more tons of steel per person and per ton of coal used. Their steel is of higher precision and higher quality with fewer imperfections. On a level playing field, Bethlehem Steel gets beaten.

Next, the magic cure, like going to Mexico for Laetrile. That cure in the United States is the theory that we don't have to be competitive in industrial products. We can be competitive in services or something else.

The only people who believe that are those who don't look at the data. In 1986, we exported $55 million worth of services. How much in services did we import? $58 million. We had a deficit of $3 million in services.

Why don't most Americans react better to these truths?

MOST Americans don't understand where the rest of the world is. We like to think that we're a sophisticated, worldly nation. But we're not. There are 240 million of us; less than 30 million have passports. And we remember a world that isn't there. Many Americans think of Korea as M*A*S*H — a bunch of peasants in straw huts.

If you go to Korea today, you can go to the Daewoo assembly plant. You will see a brand-new assembly line full of the latest Japanese automobile equipment — something that does not exist in the United States. The floors are so clean they shine. There's a very bright, well-educated Korean work-

force building cars. All the design and engineering is done by Germans from Opel. There's not an American in that facility except someone touring it. What are they making? Pontiac LeMans for sale in America.

Okay. How should we react to our large trade deficit?

THE United States' trade deficit is to economics what a black hole is to physics. The farther you get into it, the harder it is to get out of. And if you get into it, all of the normal rules don't apply. If you had told me in 1964 that some country would eventually have a trade deficit of $160 billion, I would have told you that you were mad.

Today, you have whole dedicated industries springing up abroad to service the American market. Look at Volvo and Saab. They sell more than 50 percent of their cars to the U.S. They're not Swedish car companies; they're American car companies that happen to manufacture in Sweden.

That's why, as the dollar drops in value, the trade deficit doesn't diminish. When the dollar went up, U.S. manufacturers were perfectly happy to abandon foreign markets. Those markets were peripheral to their survival.

When the yen goes up or the German mark goes up, Japanese and Germans are not willing to give up the American market, because it is central to their survival. They'll cut wages or do whatever is necessary to preserve their market share.

I was recently at a conference with a group of young Japanese businesspeople. They had all just had their wages cut by 15 percent to 20 percent, to cope with the high value of the yen. That's something that's inconceivable in the United States. If I went into most businesses here and slashed wages across the board by 20 percent, everyone would walk out the door.

Other than cutting wages, what threats does the trade deficit make?

LAST year, one out of every four dollars lent in America was lent by foreign institutions. Now the $160 billion trade deficit represents a four-percent addition to the American standard of living. We consumed four percent more last year, and we borrowed the money to pay for it. And we're more dependent on the foreign markets than just for that four percent. Foreign banks have violated the first law of a Swiss banker, which is: never loan money to someone who is borrowing to pay interest on another loan.

There's something that today is a technical economics term, but tomorrow will be on the front pages of your newspaper: adverse shift in terms of trade. If you have to balance your balance of payments by lowering the value of your currency, then for everything you sell you get less and for everything you buy you pay more. So to make a four-percent improvement in your balance of payments, you have to cut imports by more than four percent or raise exports by more than four.

Put all these things together and you find that about eight or nine percent of the American standard of living is dependent on foreign loans.

Again, what are we to do? What can we surely say is ahead for us?

WE know this can't continue forever. What we don't know is how long it will last. We are on new financial ice. The richest nation in the world has never been the largest debtor before. In all history, this has never happened. Rome didn't borrow money. Spain didn't borrow. Great Britain didn't borrow.

Suppose the world would lend us the same amount of money — relative to GNP — that it lent Mexico. If everything were the same, the world would lend us about $650 billion. At current rates of borrowing, we would run into that wall about May of 1989.

You mentioned Mexico. We've been hearing that Mike Milken's new project at Drexel Burnham [investment bankers] is to float junk bonds to Latin America to help them deal with their debt. What do you think of that idea?

THERE are all kinds of things that you can do with Latin American debt. Swaps. Assets redeployments. For a financial firm, they don't really care whether things are going up or down. They'll find ways to make money in either case. I have no doubt that Mike Milken can think up ways to make money on the Mexican debt. The problem is that that doesn't do anything to solve the Mexican debt problem. All it does is shuffle the ownership.

The banks are willing to sell off Mexican debt at a loss. Seventy percent or 60 percent of face value. But Americans still own the debt. And of course the people who buy it are just gamblers willing to take a chance that they're going to collect more than 60 percent.

The real problem in Central America is that a lot of these countries have borrowed so much money

that it's very hard to figure how they'll ever be able to pay. But that doesn't mean that there isn't money to be made juggling their debt between now and whenever.

What should we do about those loans, then?

I THINK that at some point we're going to sit down and have a conference on what I call loss allocation. We're going to look at Argentina and say: How much money could they honestly service and repay, consistent with some kind of economic growth?

Let's say that number is forty billion. And they borrowed seventy. Then there's thirty billion dollars in losses. The question is: How many do we allocate to the banks? You can't allocate them all to the banks, they don't have enough money. How many can be hidden in the world bank? How many can be hidden in the IMF? And how many are going to have to be paid by the taxpayers of wealthy industrialized countries?

A third of the Latin American loans are Japanese. The Americans are not the only industrial taxpayers who will have to pay. But somewhere out there in the future, the taxpayers are going to have to pay.

You've written a lot about consumption taxes. Do you think anything is going to be done about those?

THE next president of the United States, Republican or Democrat, on January 22, is going to have a meeting about raising taxes. He may not do it, but he's going to have a meeting about it.

What the economic advisors will tell him is: Look, there's some small probability that if you don't raise taxes, the rest of the world will continue to lend us money for eight years. And as long as they continue to loan us money, there's no reason to raise taxes. But if they decide to quit lending us money, then you'll be seen as being forced by the rest of the world — essentially an IMF ultimatum — to raise taxes. And that would look very bad.

If you do it in February, you can blame Ronald Reagan. But if the lending stops three years from now, then you won't be able to blame Reagan.

So the next president will have a tremendous temptation to do what Deukmejian did in California — inherit a deficit from the previous governor, raise taxes by 110 percent of what's necessary, and then a year before you run for reelection, you lower taxes by 10 percent. That's what every governor does who inherits a deficit. And that's what the next president will be tempted to do.

If he decides to raise taxes, then it will be something like a gas tax, which is a consumption tax. Or maybe a value-added tax. He won't want to raise income taxes.

Are our current trade problems integral to our system?

THE fundamental long-run American problem is that our productivity over the last two years has been growing at 0.8 percent. Less than 1 percent a year. At the same time, the rest of the industrialized world has been growing at a 4 percent rate. Korea's actually been at twelve.

Raising the level of productivity is the central American challenge. And it's not a Washington, D.C. challenge. Washington, D.C. doesn't determine the American rate of growth in productivity. It's a local-firm challenge, because the rate of growth in productivity is just going out to all the firms and adding up growth. Increased productivity is the name of the game at the level of the firm and it's the name of the game at the level of the economy.

So low productivity growth is the key problem? If we fix that we'll be in good shape?

LOW productivity growth is a simple problem. Nobody can build a high-quality product out of low-quality components. It's impossible. And nobody can build a high-quality economy out of low-quality inputs. In order to have a world-class economy, you have to have world-class inputs.

Now what are the inputs in any economy? The quantity and quality of its workforce. The quantity and quality of its capital stock. The level of research and development in technology. And the quality of its management. Those are the four fundamental inputs. All you have to do is take those four points, and compare them to the inputs in any of our competitors. Japan, Germany, Korea. Where we are deficient, we have to raise the level of that input, up to and hopefully above world levels. But you'll find you come back to a very simple problem: there aren't many areas where we measure up to world levels.

Take the workforce: according to the last census, 13 percent of our workforce is functionally illiterate. What fraction of the Japanese workforce is functionally illiterate? One-half of one percent. Only 72 percent of American young people graduate from high school. What fraction do you think graduates in Germany? 92 percent. If you

give eighteen-year-olds a math exam, the average American knows half as much as the average Swede. How can you operate in a computerized, mathematized system knowing half the mathematics of your competitors? You can't.

But how can we effectively upgrade education in the U.S.? State and federal governments have been throwing money at that for years.

THE answer is fairly simple. Our kids go to school an average of 180 days a year. And the average kid is absent 22 days a year. So he's actually in school 152 days a year. The average European kid goes to school 220 days. The average Japanese kid goes to school 240 days. And the Koreans think the Japanese are lazy about education.

It's a form of American *chutzpah* to think we can learn in 158 days what it takes a Japanese 240 days to learn. If you're not willing to do the easy thing — lengthen the school year — how in the world are you going to do the hard thing — make what goes on in there better?

180 days, when it began, was the longest school year in the world. Now it's the shortest. We haven't gotten worse. They've gotten better.

That takes care of the workforce. Where do we stand in terms of the other three inputs?

WE can talk about capital. We save 4 percent of our income; the Japanese save 21 percent of theirs. How do you plan to outperform an economy that saves five times as much as you do?

Research and development? We put 1.8 percent of our GNP in civilian R&D. The Germans put 2.8 percent of theirs in civilian R&D.

I have what I call Thurow's Axiom #1. Most of the time, a German engineer with money is better than an American engineer without money. Not all the time, but most of the time.

Let's come to management. Between 1978 and 1986, the number of blue-collar workers in America fell by 1.5 million. That's a 5-percent cut. And in the same period of time, after correcting for inflation, private real output was up 18 percent. They're producing 18 percent more with 5 percent less; that's a 23-percent gain in productivity.

Over that same eight-year period, American firms added 10.5 million white-collar workers to their payrolls. A 23-percent increase in employment. Again, there was an 18-percent increase in output. So white-collar productivity fell by 5 percent.

The decline in white-collar productivity offset the gain in blue-collar. We have over 60 million white-collar workers, and only 30 million blue-collar. There are two people in the office in most U.S. firms for every one in the plant. If I went to downtown San Francisco and blew up all those office buildings, I would be raising American productivity growth! Gains in productivity in America will have to happen in the office. That's where all the people are.

The dawn of the information age hasn't improved management efficiency?

IN America, everything is management by numbers. So many times, I've walked into a CEO's office. There he's got a big pile of computer printouts on the daily inventories of the Singapore plant. But he never looks at them. And if he did look at them, what would he do? But it makes him feel good that they're there. It's security. Even though the numbers may be very expensive to generate.

The same thing with office automation. You've got to redesign the structure — who reports to whom and how. Giving a word processor to your secretary is a waste. What pays off is if you do the word processing and don't have a secretary.

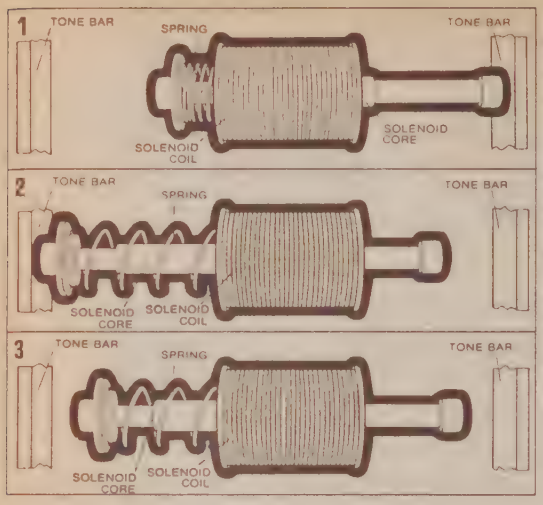
What do you think of everyone's fascination with the Pacific Rim?

I THINK the talk about the Pacific Rim is basically talk about the past. Because all of the data on the Pacific Rim is dominated by the success of Japan. And we know that Japan is not going to be as successful in the next twenty years as they were in the last. Now they are a world leader and they can't grow as fast as they used to.

China's not going to boom for twenty or thirty years. It's a country with a per-capita income of $200. It takes you twenty or thirty years to get your feet on the ground so you can start. The Koreans are a good example of that.

Once you get past Japan and China, you're then talking Asian countries with very small populations. And there are other things. We don't count Latin America, but they're also Pacific Rim. They are basket cases. The Phillipines is a basket case. Indonesia is a basket case. What country has the longest Pacific coastline of any country? The Soviet Union.

Put all this together, and to say that the Pacific Rim will boom and carry the rest of the world with it is extrapolating trends from the past 30 years that can't be extrapolated into the future. ■



1 How a chime works: Bing!

Pressing a push button completes an electrical circuit between solenoid and transformer. Current flows through the solenoid coil, creating a magnetic field which pulls the iron core through the coil *(arrow)* to strike the right tone bar. As the core moves it compresses the spring.

2 Bong!

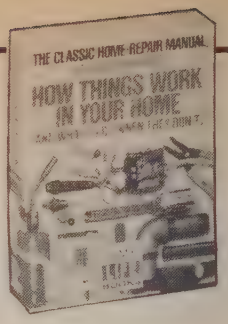
Releasing the button opens the circuit, and the current stops flowing; the coil ceases to act as a magnet. Now the spring expands, snapping the core back *(arrow)* to strike the left tone bar. At this point the spring is slightly extended.

3 ....

The spring now contracts slightly, but not enough to pull the solenoid core all the way back to the right bar. The core thus comes to rest between the tone bars; the chime is silent and ready for another push of the button to begin a new cycle.

Troubleshooting Doorbells and Chimes

Problem	Possible Causes	Solution
Bell or chime does not sound	Fuse blown or circuit breaker tripped	Replace fuse or reset circuit breaker
	Push button contacts corroded or dirty	Clean contacts with fine sandpaper
	Push button broken	Replace push button
	Defective transformer	Check transformer output terminals with low-voltage tester *(page 137)*; if tester lamp does not glow, replace transformer
Bell does not ring	Interrupter contacts fail to make electrical connection	Clean contacts with fine sandpaper
	Interrupter contacts stuck shut	Gently bend contact arm until contacts open
Chime does not sound	Solenoid core jams in coil	Clean core with small brush, and lubricate with silicone spray
	Short circuit in push button	Examine opened button for contacts between bare wires; separate them or rewire
Bell does not stop ringing	Short circuit in push button	Examine opened button for contacts between bare wires; separate them or rewire



How Things Work In Your Home
(and what to do when they don't)
John Paul Porter, Editor
1987; 368 pp.
$14.95
Henry Holt & Company, Publishers
($17.95 postpaid from Whole Earth Access)

How Things Work In Your Home

A book for the whole family, you might say. The kid might want to know what makes the doorbell ring; you might be more interested in why it doesn't. Both of you will get your answer in this utterly clear book (done in the famous Time-Life manner). Modest do-it-yourself repair procedures, complete with a discussion of the needed tools and how to use them, are a bonus. The illustrations are remarkably good. The whole thing *is remarkably good — every home should have one handy.*
—J. Baldwin

Resource-Efficient Housing Guide

The redoubtable Rocky Mountain Institute (Amory and Hunter Lovins, props.) continues its increasingly effective efforts with this bibliography of services, books, periodicals, and energy information sources. Most of the entries are excerpted deftly enough to be considered information sources themselves. You'd have to subscribe to a truckload of periodicals to keep up with what's presented here in one book. It's where you find out where to find out.

RMI is always adding to their list of publications. A look at their most recent list shows one that I particularly like: ***Fun Energy Facts to Know and Tell at Cocktail Parties.*** *Described as a "snapshot of the energy picture," it arms you with arguments that'll really get to supply-siders — e.g. we're paying $495 a barrel for Mideast oil if you count the cost of the fleet defending the tankers, 90 percent of which are not coming to the U.S.A. You might ask your Senator about such things.* *—J. Baldwin*

Resource-Efficient Housing Guide
Robert Sardinsky
1987; 129 pp.
$15
postpaid from:
Rocky Mountain Institute
1739 Snowmass Creek Road
Snowmass Creek, CO 81654
303/927-3128
or Whole Earth Access

The Most Energy Efficient Appliances
American Council for an Energy-Efficient Economy
1987 edition; 24 pp.
$2 postpaid from:
ACEEE
1001 Connecticut Ave. NW, Suite 535
Washington DC 20036

If you are about to buy a major appliance, get this booklet. It is the best single source of up-to-date information for householders on the comparative efficiencies of a variety of major home appliances: refrigerators, freezers, dishwashers, clothes washers, room air conditioners, central air conditioners, heat pumps, water heaters (gas and electric), heat-pump water heaters, gas boilers, gas furnaces, and oil burners and furnaces. It lists the most energy-efficient residential products presently available in the U.S. Only those which are mass-produced and widely distributed are included. The ten top models (give or take a few) are cited in each category. The list gives brand name, model number, and applicable specifications--capacity, energy-efficiency rating, energy consumption, and, for some, estimated annual energy cost. There's also a handy worksheet section you can use to compare the lifetime operating costs of different appliance models you may be considering.

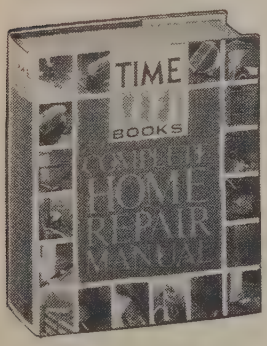
Time-Life Books Complete Home Repair Manual

This massive volume is derived from a Time-Life series of specialty books on home repair. That's a good recommendation; they were truly good. Taken together as they are here, they add up to being the best of the breed — even better than the excellent Reader's Digest books we've championed in the past. When I compared my knowledge to what this book has to say on a subject, I not only found perfect agreement with my experience, but I learned something new as well. That gets my vote every time! In fact, I used the book several times when I had it for review. With this manual in hand, you should be able to tackle just about anything. Except appliances and other hardware — they're in ***How Things Work in Your Home*** *across the page here. If you would be master or mistress of all you survey, you'll need both of these remarkably competent books — there's not much duplication between them.*

—J. Baldwin

Time-Life Books Complete Home Repair Manual
1987; 479 pp.
$24.95
($26.95 postpaid) from:

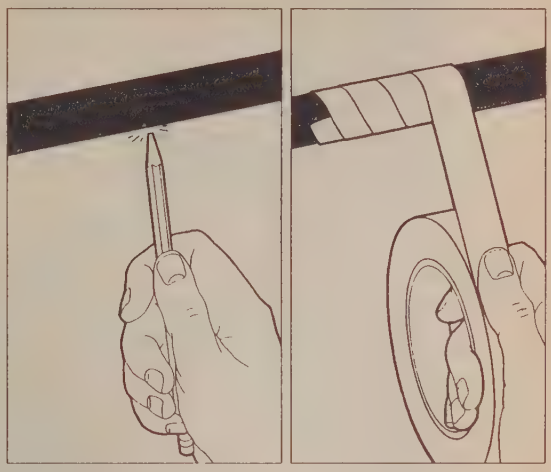
Prentice-Hall Company
Attn.: Mail Order Sales
200 Old Tappan Road
Old Tappan, NJ 07675
201/767-5937
or Whole Earth Access



A Patch for a Tiny Leak

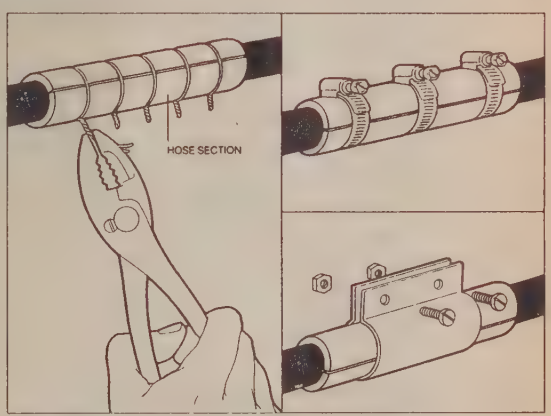
1 Plugging a hole with a pencil. One of the best emergency plugs for a small leak in a supply pipe is a pencil point jammed into the hole and broken off; the soft graphite point will conform to the shape of the opening and seal the leak.

2 Securing the plug. Dry the surface of the pipe after the leak has been plugged, then roll heavy tape over the damaged area to hold the plug in place. Wrap the tape several inches to the left and the right of the leak



A Patch for a Larger Leak

A hose patch. An effective temporary patch can be made by splitting a section of rubber hose lengthwise so that it will fit around the pipe. There are several ways to secure the hose. Strong, flexible wire such as that used for hanging pictures will serve—make a series of loops along the patch, spaced about an inch apart, and twist each loop tight with pliers *(right)*. An automobile hose clamp *(far right, top)* holds more uniformly and can be adjusted to fit virtually any diameter of fresh-water pipe; it is best to install at least three clamps over the patch. To guarantee uniform clamping pressure, cut a section out from a tin can wide enough to cover the leak and long enough so the top rims of the sheet metal extend above the pipe when fitted around the hose patch. Bend the top rims at a right angle to the pipe so they fit closely together. Drill holes through both rims and fasten with bolts and nuts.

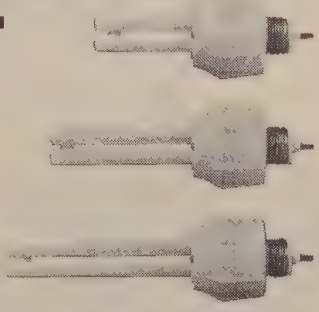


Renew America Catalog

This tempting catalog bills itself as "a selection of environmentally sensitive products." Fair enough. Here's where you can get those efficient light bulbs you've heard about, recycled paper products, solar toys, fuel-saving devices, water use reducers and even a solar electric fence charger. You're helping a good cause by purchasing here: the catalog sales help fund the worthy Fund for Renewable Energy & the Environment, presided over by none other than Denis Hayes, one of our all-time effective environmental activists. Take a look.

—J. Baldwin

Renew America
Catalog
$2 from:
The Renew America Catalog
128 Intervale Road
Burlington, VT 05401
802/862-2999



SELF CONTAINED SOLAR POWER BATTERIES. Here's real autonomy! The first D-sized Ni-Cad battery that recharges itself with a small solar cell inside. Needs 20 hours of sun to fully recharge itself from fully discharged state. No hook-ups needed. Great for use where there's no electricity, but it can also recharge through AC wall charger. Comes in weatherproof and durable housing. One year limited warranty. 1 pair D size, 3 oz. each. **#004** $18.95 ($2.00).

NEW GENERATION OF LIGHTS. Combine the most energy-efficient ballast on the market with a compact fluorescent bulb rated at 10 times the life of a comparable incandescent and you've got up to 85% savings on operating costs. Lower heat output also saves on summer cooling costs. These terrific twin tube bulbs give off the same quality of light as incandescents. Use in table, wall, and ceiling fixtures. The 7-watt replaces a 40-watt incandescent and the 9-watt replaces a 60-watt bulb. Ballast (2 1/8"h. x 2 1/4" dia.) operates at 1.5-watts, 5, 7 and 9-watt lamp and ballast heights are 4 5/8", 5 7/8", and 7 1/8" respectively. 5-watt ballast and bulb **#349**, 7 watt **#350**, 9-watt **#351**, $15.25 ea. ($2.00).

National Association for the Exchange of Industrial Resources

Several years ago we discovered a fascinating organization in Illinois called NAEIR. For a $495 annual membership fee, nonprofit organizations have access to a huge warehouse of materials donated as tax write-offs by major corporations. Member organizations receive quarterly catalogs (each 400-500 oversized pages) from which they order needed items. Every effort is made to give the greatest amount of gifts to each member based on availability, requests, etc. The goods themselves are free, although members are required to pay shipping on each order and a small handling fee.

Some of the things the Gesundheit Institute has gotten during our membership: computer books and supplies, heavy-duty pumps, motors, hundreds of small power and hand tools (saws, hammers, drills), maintenance supplies, thousands of dollars worth of Anderson triple-pane windows, and rubber tiles for outdoor decking.

Drawback: lots of the stuff donated to NAEIR is discontinued merchandise, odd-sized things, parts of things with the rest of the item no longer available. You can get around this by reading the catalog carefully and making sure you know what you are getting. You can also call and ask questions. It makes good sense to have people do the ordering who know about the area they are ordering in.

Once we got 350 screwdrivers of assorted shapes and sizes. After we had loaded everyone down with their own set and stashed same in every conceivable drawer and tool box, we still had hundreds to distribute to other do-gooder groups we know. Which isn't all bad. We have done some barter of NAEIR goods for other needed items, but we recently heard from NAEIR that you are not supposed to do this. (We're bad.)

We feel very good about our involvement with NAEIR, and think we've gotten many times over our membership dues and shipping costs in valuable materials.

—Gareth Branwyn
Gesundheit Institute

NAEIR
Annual membership fee
$495
P. O. Box 8076
Galesburg, IL 61402
309/343-0704

LAWN SPREADER
STOCK NUMBER 1201275 — QUANTITY AVAILABLE 2231 — UNIT VALUE $15.00
BRAND: LAWN TRACKER — MFG by : SUNCAST CORP. — MFG No.: LTD2100

LAWN TRACKER DROP-TYPE LAWN SPREADER
• HOPPER CAPACITY: 80 LB. • DROP WIDTH: 21 IN. • TOUGH, ALL PLASTIC, NO RUST CONSTRUCTION • RUGGED 8 IN. DIA. POLYETHYLENE WHEELS PROVIDED FOR ADDED STABILITY & DURABILITY • HIGHLY VISIBLE ADJUSTMENT CONTROLS ARE CONVENIENTLY LOCATED ON THE HANDLE WITH EASY TO READ SCALE • EXCLUSIVE DROP-STOP FEATURE INSTANTLY SHUTS OFF FLOW OF MATERIAL WHEN UNIT IS SET DOWN • 1 PER CARTON •

WEIGHT: 10 LBS — SEE PICTURE

Hoky Carpet Sweeper

A carpet sweeper is inexpensive, lightweight, and easy to pull out to sweep up a few spills. These very features are touted heavily in the current advertising campaigns for electric brooms. ("Is your vacuum cleaner a drag to pull out of the closet? Then buy an electric broom!") A carpet sweeper is an "old-fashioned" tool that seems to have been forgotten about in the wake of the vacuum-cleaner generation.

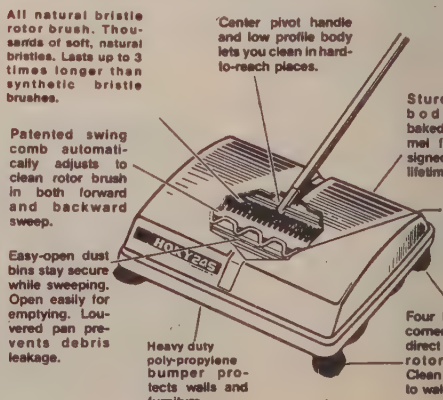
The advantages to a portable, nonelectric appliance are many: you can reach every corner without changing the plug, you don't have to lug around a heavy machine (which can get hung up on furniture), and you don't have a cord to trip over.

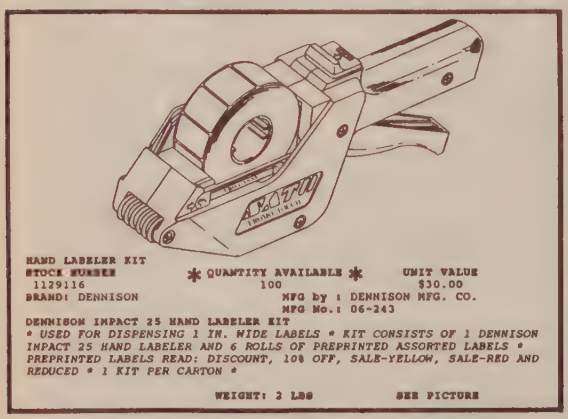
The Hoky carpet sweeper is very compact and efficient — it works great! Many major airlines (United, TWA, JAL, etc.), hotels (Hyatt Regency, Hilton), and restaurants all over the world use a Hoky daily.

The commercial model is all-steel construction — durable and efficient. Works on all types of floors: hard floors or carpeting, including deep pile and long loop. The compact size (9½" x 8" x 2½") gets into and under tight spaces. Natural-bristle rotor brush (more durable than synthetic brushes); four corner brushes to reach the walls, four-section steel handle comes apart for storage, and vinyl bumper to protect furniture. Cleans rugs and bare floors of everything from flour to pins, pet hair, threads, lint, sand, popcorn, and plain old dirt. Good for a clean sweep!

—Toni Garret

Hoky 24S: $30 postpaid from Hoky International Marketing Company, Inc., P. O. Box 803, Lakeville, MN 55044; 612/469-5433 (or Whole Earth Access).


All natural bristle rotor brush. Thousands of soft, natural bristles. Lasts up to 3 times longer than synthetic bristle brushes.
Center pivot handle and low profile body lets you clean in hard-to-reach places.
Sturdy steel body with baked on enamel finish. Designed to last a lifetime.
Patented swing comb automatically adjusts to clean rotor brush in both forward and backward sweep.
Patented Wonder-bar traps debris securely.
Easy-open dust bins stay secure while sweeping. Open easily for emptying. Louvered pan prevents debris leakage.
Four horse-hair corner brushes direct dirt into rotor brush. Clean right up to walls.
Heavy duty poly-propylene bumper protects walls and furniture.
HOKY 24S



HAND LABELER KIT
STOCK NUMBER 1129116 — QUANTITY AVAILABLE 100 — UNIT VALUE $30.00
BRAND: DENNISON — MFG by : DENNISON MFG. CO. — MFG No.: 06-243

DENNISON IMPACT 25 HAND LABELER KIT
• USED FOR DISPENSING 1 IN. WIDE LABELS • KIT CONSISTS OF 1 DENNISON IMPACT 25 HAND LABELER AND 6 ROLLS OF PREPRINTED ASSORTED LABELS • PREPRINTED LABELS READ: DISCOUNT, 10% OFF, SALE-YELLOW, SALE-RED AND REDUCED • 1 KIT PER CARTON •

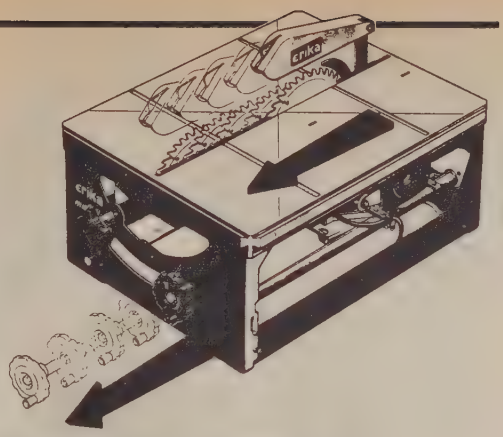
WEIGHT: 2 LBS — SEE PICTURE

FILMSTRIP VIEWER
STOCK NUMBER 1195082 — QUANTITY AVAILABLE 1 — UNIT VALUE $445.00
BRAND: SYNCHROMATIC — MFG by : DUMONT INSTRUMENTATION — MFG No.: 210

SYNCHROMATIC 110 SOUND FILMSTRIP VIEWER
• OPEN PROJECTOR SIZE: 12 IN. WIDE X 16 IN. LONG X 15 1/2 IN. HIGH • SCREEN SIZE: 8 IN. X 10 1/2 IN. • OPERATES ON COMPACT FILM/SOUND 110 CASSETTE (SMALL ENOUGH TO FIT IN A SHIRT POCKET) • OFFERS REAR OR FRONT PROJECTION • PERFECTLY SYNCHRONIZED FOR BOTH FORWARD & REVERSE OPERATION • SYNCHROMATIC CLOSES TO LOOK LIKE AN ATTACHE CASE • VOLTS: 110 • WATTS: 120 • HZ: 60 • 1 PER CARTON •

WEIGHT: 18 LBS — SEE PICTURE

Mafell Erika Pull-Push Saw



Tablesaws are great for ripping stock longways — making a 2x4 into two 2x2s for instance — but they're not very good at cutting that 2x4 shorter. You'd normally use a radial-arm saw for that sort of work unless the piece was pretty small. Erika looks like a normal tablesaw and acts like one too. But she will also slide her blade push-pull about 11 inches, sort of like an upside-down radial-arm saw. Cut-off operations are thus easy because you don't have to slide the workpiece through the blade. Nifty, eh? The same West German company also makes chainsaws that cut mortice-and-tenon joints for post & beam work.
—J. Baldwin

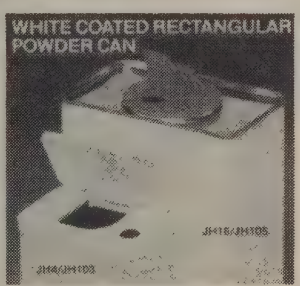
Mafell Erika: approx. **$1300** (many accessories available at extra cost); catalog **free** from Mafell North America, Inc., P. O. Box 363, Lockport, NY 14094-0363.

Freund CANalog

Wanna buy a stainless-steel 55-gallon drum? Fancy cookie cans, maybe? Empty beer cans? The machinery to close cans? Boxes? This color catalog shows more types of containers than most folks have even dreamed of. And they're available in small quantities (mostly — there's a minimum quantity for some items). Of course you pay a horrible premium for buying just a few of anything, but on the other hand, you get a handsome discount for larger orders. The important thing is that this outfit will sell 'em to you in reasonable batches instead of insisting on a freightcarfull. As with all companies offering a small-order service, you should be reasonable and not bother them if you're not serious. They might change their mind. *—J. Baldwin*

Freund Containers

Catalog **free** from:
Freund Can Company
174 W. 84th Street
Chicago, IL 60620
312/224-4230



4 Oz. White Spice Can with 3-port Plastic Plug:
Qty. per case **504**
Pr. each in case lots **.22**
Price per case **110.88**
Min. qty. **100** ***Price each*** **.44**

16 Oz. White Spice Can with Red Spoon/Sift/Pour Plastic Plug:
Qty. per case **126**
Pr. each in case lots **.54**
Price per case **68.04**

FREUND ECONOMY CAN SEALERS— HAND OPERATED

Great value with a small price! These hand operated sealers will give years of satisfactory, dependable service. Here is a safe, economical method of sealing. Includes easy-to-follow instructions.

Model No. 200—Equipped to seal No. 1 (211 x 400), No. 2 (307 x 409), No. 2½ (401 x 411) and No. 3 (404 x 414) cans **$98.76**
Shipping weight 11 lbs.

Ozark Handle & Hardware

Remember the one about the Everlasting Hammer — once in a while you replace the head, and every now and then give it a new handle? Here's where you get the handle. Or the handle for just about anything else you might name. *—J. Baldwin*

Ozark Handle & Hardware
Catalog
$2 (refundable with first order) from:
P. O. Box 426
Eureka Springs, AR 72632
501/423-6888

OCTAGON ADZE EYE NAIL—CLAW—CARPENTER'S HAMMER

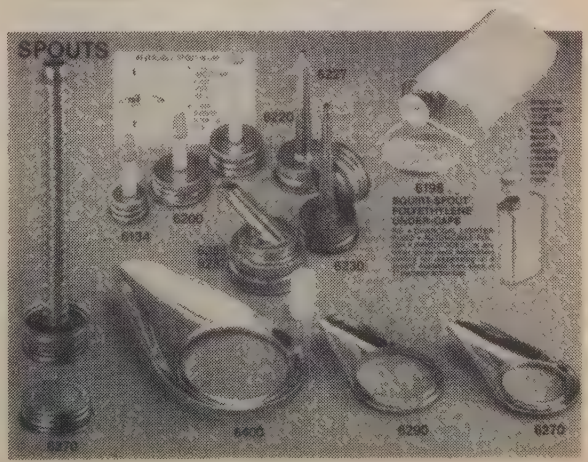
14" for 16-20 oz. tool—9/16" x 1 1/16" eye

2014 S	Supreme	3.20
2014 F	Flamed	2.90

D-GRIP SCOOP BENT HOLLOWBACK SHOVEL (With Shoulder)

Dia. 1 1/2"—Single Bend Socket 9 3/4"—Shoulder 1 1/4" Dia.

3330 E	Eureka	30"	8.20
3338 E	Eureka	38"	9.00



RENTAL TOOL ENLIGHTENMENT

DO-IT-YOURSELF TURNS PRO

BY J. BALDWIN (seated on backhoe)
WITH RICHARD NILSEN

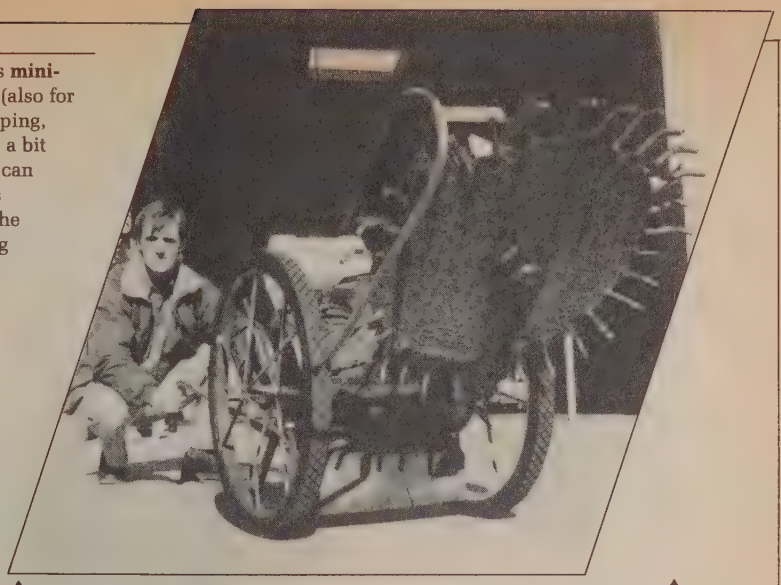
ALL PHOTOS BY KEVIN KELLY

FOR MONTHS, I thought the four-and-one-half acres of spiffy new construction near my highway exit was going to be a Holiday Inn. Turned out to be a *Big 4 Rents*, "The Taj Majal of Rental Emporiums," as assistant manager Alan Aschow proudly put it during a tour of the facility. No small-time operation this. There are 55 employees, most of them mechanics who assure that the remarkable array of tools and machines is maintained in good condition right down to the paint. Not a trace of worn-out, sleazy equipment to be seen. The only hint of old-time-small-time renting can be found in the menu of available items: floor sanders, generator sets, and tools for working on vehicles, plumbing and concrete are there as always. What's new is the wide variety in the assortment of professional contractors' equipage offered to ordinary civilians like you and me.

Don't be intimidated. All the stuff comes with complete instructions (by an instructor, if necessary) and safety hints. Larger machines are delivered to your job as part of the service. Once past your psychological role change to "equipment operator" and with a little practice (most machines are easy to learn) your potential is enormously enhanced. Just walking around the lot will give you ideas; even the battle-scarred veterans of Whole Earth had to ask what some of the things were for.

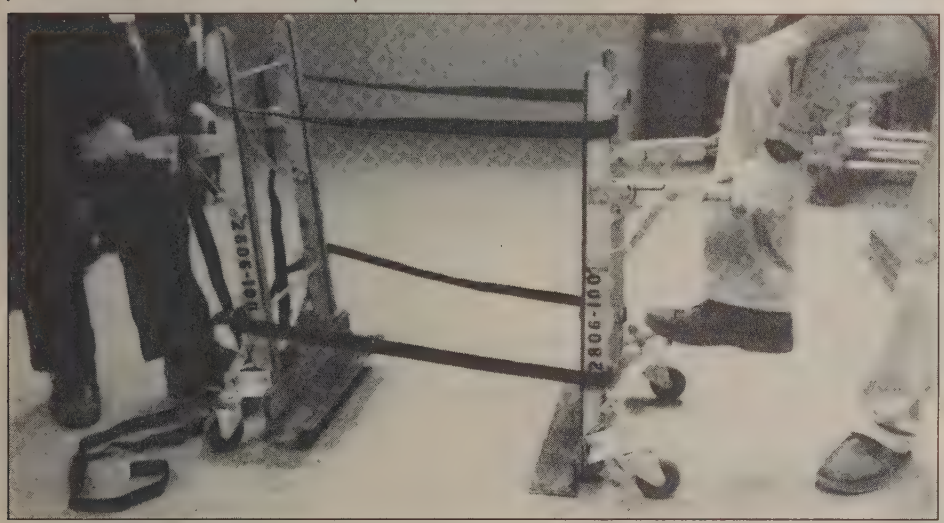
Here is a small sample for your delectation. Not shown is the retail section where many of the items can be bought if renting doesn't make economic sense. There's a party and sporting-goods division too. Rates shown are for one day. Weekly and monthly rates are usually much less.

Almost cute and certainly competent, this **mini-backhoe** can go where its bigger brothers (also for rent) can't: through gates, behind landscaping, near foundations, into the backyard. With a bit of practice on the hydraulic controls, you can claw the 12″- or 15″-wide bucket as far as 5′. Not shown is a dinky dozer blade on the other end of the machine — nice for filling in holes and other minor dirt-shoving. There's a jackhammer attachment too. ($165/day).

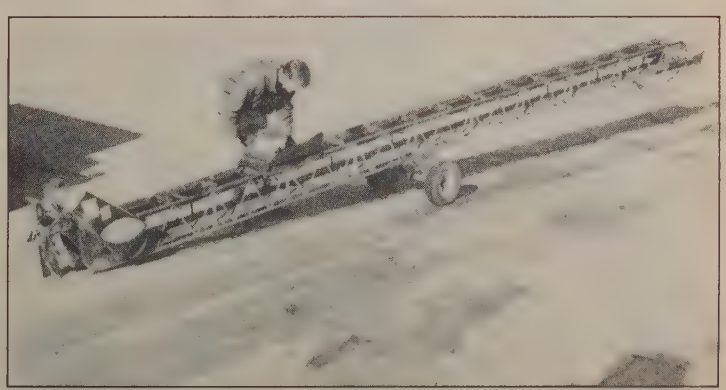


One of the most recalcitrant, herniacal, hippopotomian burdens is an upright piano — they weigh as much as 1,000 pounds. This two-piece **piano dollie** grasps the beast at either end (you'll have to imagine an undersized "air piano" in this posed shot) and step-levers it airborne onto heavy-duty casters with big rubber wheels. Egad! ($9.50/day and worth every penny).

Hi-wheel mower flattens stands of weeds and tall grass easily, with better reliability than sicklebar types. This is not a homeowner's pip-squeak; wear goggles, ear protectors, and heavy boots. Heavy pants too (two layers are a good idea). And keep your back to windows, cars and other items vulnerable to machine-gunning by flying gravel; I can tell you from sad experience. ($77/day. Share it around — good firebreaks make good neighbors.)

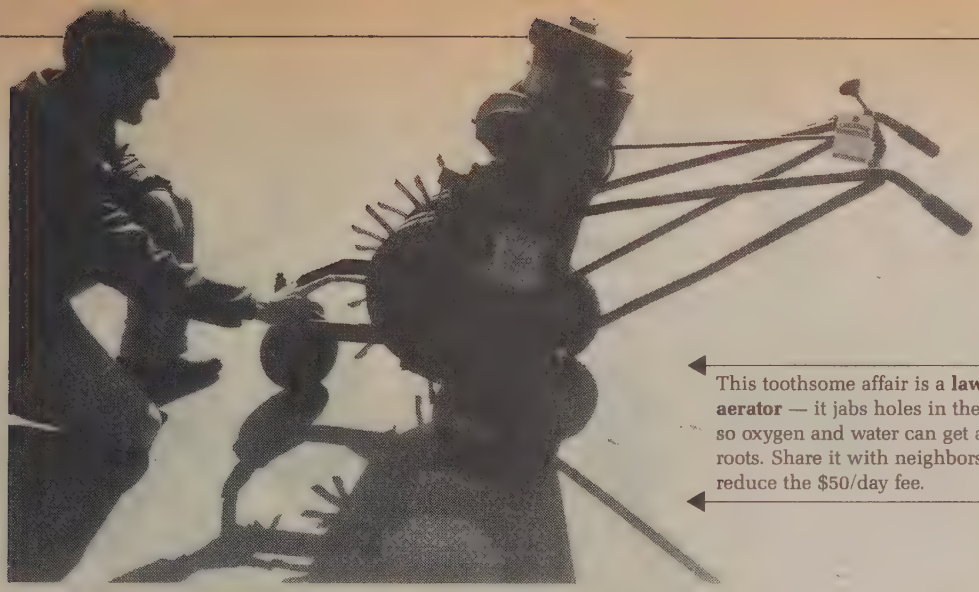


An **electric conveyor belt** can schlep materials such as dirt, rocks and sand out of the basement (it'll fit through the window), over the fence and into the truck. Angle and support point are adjustable. It can be horsed into position by two people. Knowing that this thing exists and can be had for $88/day can inspire your laziest imaginings.



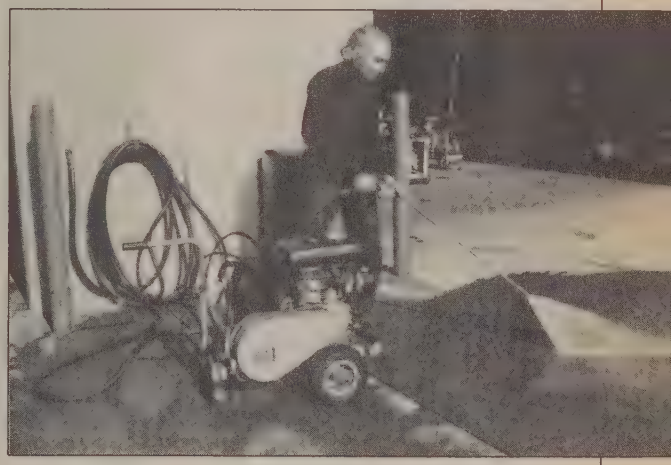
Dick Fugett leaning on Big Bertha.

It ain't exactly easy, but a 110-volt electric **demolition hammer** can make "permanent" concrete and stone go away, albeit noisily and with a bit of a workout for the operator. You can also get bits (above left) for chipping, asphalt-cutting, clay- and hardpan-digging and for drilling neat, big, round holes. You'll also need gloves, goggles and ear protection. Maybe a respirator mask too if there's dust. Rock Rambo! ($28/day plus bits.)



This toothsome affair is a **lawn aerator** — it jabs holes in the turf so oxygen and water can get at the roots. Share it with neighbors to reduce the $50/day fee.

Magnetic sweeper grabs ferrous tire-nabbers outta the driveway or even your lawn. A pull on the handle releases the gathered material, in this case a nail, a paperclip, and a rusty razor blade ($6/day).



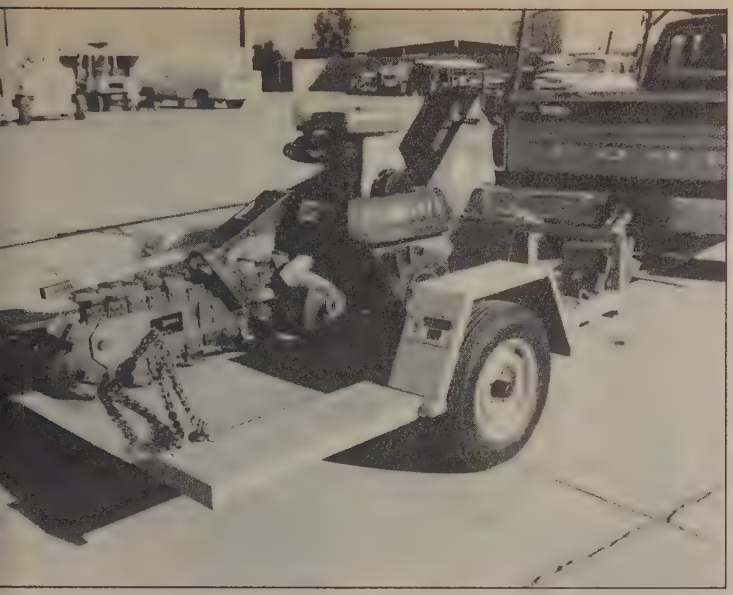
The blast from a **high-pressure washer** will de-paint, de-dirt (and de-skin if you aren't careful) most anything you aim it at. Hot-water models are available for stubborn jobs ($60-$70/day plus soap).

Stock trailer carries cows and other big critters that can't fit humanely in a horse trailer ($35/day).

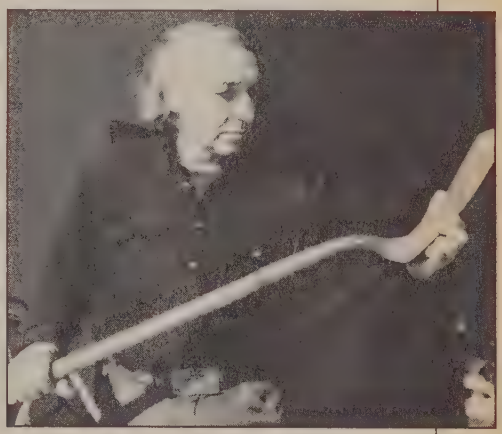
Look at the size of these **stepladders!** Most rental stores have a wide variety of sizes and types. For more extensive work, think scaffolding; you can rent that too ($8-$26.50/day for ladders).

Heavy-duty handtruck features little caterpillar treads to help on stairs. You're still the motor, but these cut the need to lift over each step edge ($7/day).

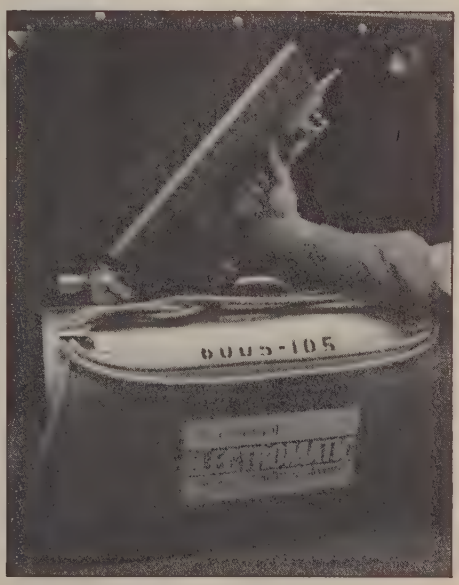
Carpet stretchers. On the left is a knee-powered model — torture if you're not used to it. The right-hand one is lever-operated — much easier. Unless you like wavy carpets, you need one of these when installing-your-own ($9-$18/day).



Turns out that even if you got good grades you may not be immune to a bit of ditchdigging. If that's your onerous lot, there's hope: the **Ditch-Witch.** They come in several sizes; little walk-behind models (like this one on its hauling trailer) for, say, lawn-irrigation piping in easily dug soil, to big ride-ons that'll slash a skinny ditch (carbide teeth!) in challenging terrain. ($69-$295/day.) Skinny shovel helps manicure skinny ditches.



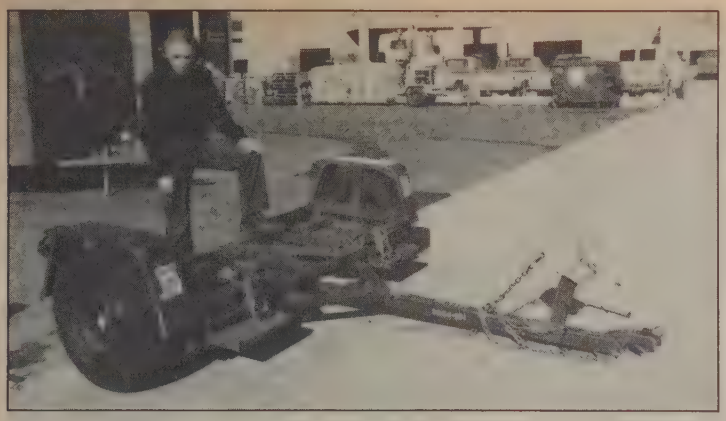
Weed-eaters pass in review. If you only need one once a year (as for cutting firebreaks), renting is by far the best deal. These professional models can be equipped with a blade that will cut bushes and saplings too. ($42.50/day plus blade — you bust it, you buy it.)



Few tasks equal wallpaper removal for frustration, godawful mess and divorce-inducing temper tantrums. At least it'll go faster with a **steamer-offer** ($18/day).

Fix your chimney or manicure that impossible tree with a **mobile work platform/lift**. You can drive the beast from the raised platform (carefully, yes?). They come in many sizes and prices (figure around $200/day).

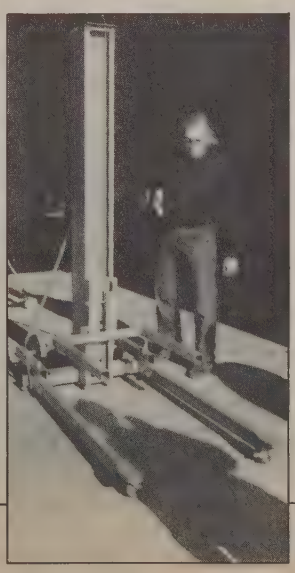
I've used these kerosene (or propane) **heaters** to dry insulation after a roof leak and to heat a tent erected over a vehicle disabled in subzero Alaska. Contractors use them to hurry damp sheetrock jobs toward completion. Bear in mind that these things are hungry, both for oxygen and fuel. ($24-$82/day plus fuel.)



Smart motorhome owners have been using **Car Caddies** for years; holding one end of the towed Jeep or "lifeboat" Honda off the road greatly reduces wear on tires, steering and transmission. You have to be a snake charmer to back one up though . . . ($32/day.)

Here in flood country, watersoaked wall-to-wall carpeting is a common disaster, and the local tool renters have the answer: this long-nosed **Turbo Blower.** Stick the flat snout under a bit of carpet you lift in a doorway, and turn it on. Cool air (heated air will cause mildew) sort of inflates the entire carpet free of the floor, blowing the water out of the weave. If you're lucky enough to have water-resistant underlayment, that'll do the deed. If not, then you'll have to pick up the carpet and re-lay it, but at least it will be dry. ($22/day.)

This is a **pallet lifter,** the poor man's forklift. It only lifts a few inches, but that's all you need unless stacking stuff high. ($28/day.)



How do contractors lift heavy items such as air conditioners into position? They use a **Genie lift,** a crank-powered light-duty forklift. It'll handle 500 pounds to 20 feet. ($20/day.)

Post hole auger uses a powerful gasoline engine to do the digging, but you'll still work — it's heavy and the thing can kick like a mule if it hits a snag. Don't be fooled by those skyhook wires in the photo, they're showroom display, not angelic helpers. ($42/day.)

That little hardware-store **plumber's snake** you use to extract the apple core from your toilet's throat is a mere garter snake compared to this Python. Spun by an electric motor, it shreds everything in its path, including invasive tree roots. 25-100 feet long; $26-$46/day.

Most woodburning homeowners can afford a wee little **log splitter**, but not one of these big pro models. This one has a gasoline engine so you can use it in the woods where you drop the trees. Two friendly, energetic workers can split an amazing number of logs in a day. ($59/day.)

Those of you who have used one of these metal **fence post drivers** will regard it with a certain hatred, but it's really the only practical way to do the deed. Wear gloves, and don't schedule a tennis match for the day after using it; the lift-and-whupdown motion uses muscles not normally in service in human beings. ($5/day. *They* should pay *you*.)

Airless paint sprayer will lay paint "as fast as you can walk," and with surprisingly little overspray. Do you need it? Have you ever painted a shingle house with a brush? All those little cracks . . . ($50-$70/day.)

This has the look of '80s electronic quackery, but in fact it can locate buried pipes and wires a lot more reliably than a dowsing rod. The $20/day fee for an **electronic dowser** seems cheap after a morning of futile digging by guess.

An honest cord of wood (4'x4'x8') is an imprudent and abusive load for most pickups; longevity of both the pickup and yourself is likely to be shortened. A **cordwood trailer** is the answer at $29.50/day (Richard not included). You will need a full-size pickup or van to pull it.

Think of this as a high-powered stethoscope; it enables you to hear pipe leaks (and doubtless worm burps too) far underground or in walls. Alternatives to a **leak detector** tend to be messy as well as costing more than the $50/day fee.

The formidable dentures on this nasty-looking machine gnash stumps into sawdust right down to 6" below grade. How do you do it otherwise? A **stump gnasher** is $132/day. Get together with your neighbors and share the cost.

Aptly called the UnderWonder, this **horizontal drill rig** is a favorite weapon of the cable-TV installer. Use it to run pipes and wires under sidewalks, driveways or even streets; the $38.50/day fee is nothing compared to what it'd cost you to bust and replace pavement. ■

BERKELEY TOOL LIBRARY

FOR ABOUT NINE YEARS, the municipal library system of Berkeley, CA has been lending tools as well as books. Residents (only) may check out what they need from the collection of such common do-it-yourself items as Skil saws and ladders. If their address is in a HUD Block Grant area, there is no fee. Otherwise there is a modest charge. "Librarian" Pete McElligott quieted commercial tool renters' protests of unfair competition by proving that he *increased* their business by referring patrons who couldn't find what they needed in the library's limited stock.

How many people use the service? McElligott says that he serves about thirty-five people a day during the slow season (Nov.-Mar.), and as many as a hundred a day May-Oct. As you might expect, he also serves as an expert question-answerer to many more. When asked if nine years of this duty had frazzled his nerves, he replied, "No, I like it here. But I take a lot of vacations . . ."

What about rip-off? There is "some, but not too bad." Tools have been borrowed and traded for dope. Obviously, when somebody asks to borrow a ladder, pry bar and bolt cutters for the night, there is reason for suspicion. So far, a careful ID check has kept things under control.

The tool library is funded by a government grant, but there is hope that it can be incorporated into the main Berkeley library budget. When that happens, the example may encourage libraries in less politically radical places to consider offering this noticeably useful service. On the other hand, the only other tool library I've heard of is in Grosse Pointe, Michigan, hardly a radical burgh. Maybe all it takes is a little imagination.

—J. Baldwin

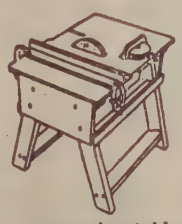
The Poor Man's Catalog

*"The Poor Man's Catalog" reminds me of an old issue of **Popular Mechanics**. It has plans for a jigsaw made of galvanized plumbing pipe, an edge planer made of wood and a vacuum cleaner motor, a 100-mile-per-gallon wooden car, and a radio built from a razor blade and paper clips. Plans are $2 to $5 apiece, with quantity discounts, and a satisfaction guarantee. I haven't built anything from the catalog yet, but it is a delight to read.*

—Joel M. Lee

Poor Man's Catalog
$2
postpaid from:
Economy Enterprises
P. O. Box 23
Highland, MD 20777
301/776-3792

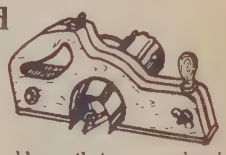
Poor Man's Table Saw



Rather than buy an expensive table saw, save a whole lot of dough by converting your portable power saw into a fine, solid, ready-made table saw. And get the big plus of having two saws in one. In less than two minutes, you can convert from table saw, back to portable saw. Yet your shop will have the convenience and precision of a solid table saw. Unit features a wide-track miter gauge, and a positive holding rip fence. We built our complete table saw using scrap wood, at a cost of under $25. Not a bad price in this day and age. When complete, according to plan, this table saw can be compared with commercial units costing over six times as much. Taken care of, it will last a lifetime. No special tools or skills required to build. Now anyone can afford a precision table saw.

ITEM NO. 030 TABLE SAW Instruction Plan Only $3.00**

Powered Edge Planer



This is a workhorse that any woodworker will be proud to own. One pass across the edge of a board will remove 1/32' of stock and leave a perfectly flat, square, edge. Yet the unit is build from scrap for almost nothing. You will need a 1/6 - ¼ hp old vacuum cleaner motor for power. Purchase a 3-lip commercial cutter and the rest is scrap. Very simple to build.

ITEM NO. 107 POWER PLANER Plan Only $4.00**

Action weather Vanes

Three seperate plans for Action type weather vanes. A fish cutting thru the air with his tail spinning. An old rooster ready to fight with "neck feathers" bristling, and a young lady trying to hold on to her flying umbrella in a stiff breeze. All are simple to build from wood and make excellent build for resale items.

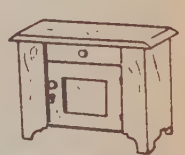
ITEM NO. 258 ACTION VANES Plan Only $3.00**

U-Build Hand Screws

If you're a woodworker and you've had to buy hardwood hand screws lately, you know they've gone out of sight in cost. (Like everything else.) You can save a bundle by building your own. Simple to make, and using our plan, you don't have to do any threading or tapping. In fact, we show you three different ways to build them at a cost of less than $4 per pair. Not bad, in these days of high inflation. No special tools or skills required.

ITEM NO. 074 HAND SCREWS Plan Only $3.00**

Colonial Commode



height 27¾"
width 29"
depth 18"

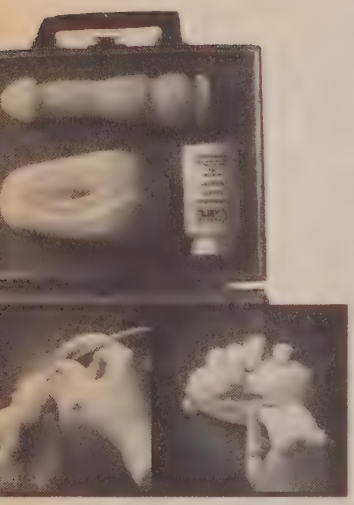
Commode: "a movable washstand with a cupboard underneath." And this solid little commode can be built from ¾" maple, cherry, pine, or birch. Features an unusually large storage area in cupboard, plus a large drawer . We saw one of these units turned into a beautiful stereo stand, with records and tapes stored in the cupboard. This unit is simple to build in the home shop.

ITEM NO. 086 COMMODE Plan Only $2.00**

The Anatomical Products Catalog

Body parts, body charts, bones, T-shirts emblazoned with all manner of interior human graphics, dummies upon which to practice such arts as urethral catheterization (aieeeel), CPR, and even childbirth. You can buy wounds, diseased organs (some quite colorful), scary displays of what-will-happen-if-you-don't-stop _____ing, and breasts with simulated cancers so you can feel what the bad news will feel like. Fascinating. Horrifying. Wonderful. Hard to say which. In color.

—J. Baldwin



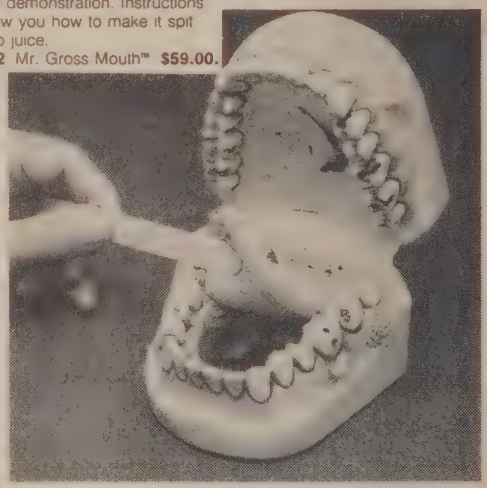
The Anatomical Products Catalog

Free from:
Anatomical Chart Co.
7124 N. Clark Street
Chicago, IL 60626
800/ANATOMY

CATHETERIZATION TEACHING MODELS These two models are the most life-like forms available for teaching catheterization. *Made from our patented BIOLIKE™ synthetic tissue*, each form has a collapsible urethra of visco-elastic nature. The male form illustrates the entire length of the urethra as it transverses the penis, triangular ligament and prostate. The female form reproduces the anatomical relationships and depths of the external genitalia and urethra. Includes carrying case and instruction card. **A26100** Catheterization Teaching Models (set of 2) **$90.00.**

BS-5 BASE OF HEAD WITH BRAIN
An interesting model of the brain in the skull. The complete brain is removable to show dura matter, 12 pairs of cranial nerves and arteries. Life-size, dissectible into 8 parts, on base. **$332.95**

Snuff Out Smokeless Tobacco with...MR. GROSS MOUTH™
Over 22 million Americans are using smokeless tobacco and many are biting off more than they can chew. It's a deadly, filthy habit. This hinged model of the teeth, tongue and the oral cavity is three times normal size and accurately shows the oral effects of chewing and dipping—including cancers. A bottle of pure tobacco juice comes with each model to put into the model's mouth for a very realistic demonstration. Instructions will show you how to make it spit tobacco juice.
A79152 Mr. Gross Mouth™ **$59.00.**



Pediatrics for Parents

The nicest compliment I can pay to any how-to publication is that I learn something new every issue. I don't normally think of being a parent as a skill one can learn from books, but ***Pediatrics for Parents*** *reminds me that even an art requires refinement. Any single issue of this modest newsletter not only covers a great diversity of child health questions, but covers every topic in the most practical, immediate, and helpful manner. Very little theory, lots of support, and great helpful hints.*

—Sallie Tisdale

•

A recent study of three and four year olds discovered that most knew they shouldn't eat cleanser, although some believed it was OK to taste it. Half of the three year olds and a quarter of the four year olds had no hesitation in eating all the chewable vitamins in a bottle. And 80% of the children thought it was alright to eat a full bag of M & M's.

One incident mentioned cast some doubt on the validity of the findings. A few days after the study was done, one of the four year olds ate 22 vitamins. And she was one who said it wasn't healthy to eat a whole bottle of vitamins.

—American Journal of Diseases of Children

•

Eyedrops Again
Here's another easy way to use eyedrops without causing fussing, squirming, or screaming. Have your child lie on her back and close her eyes. Put two or three drops into the space between her eye and nose. If it is for her right eye she should then tilt her head slightly to the right and open her eyes. If it is for her left eye she should tilt her head to the left. The medicine will flow into her eye, and unpleasantness will be avoided.

Emergency Medicine, p. 170, 8/15/84. (RJS)

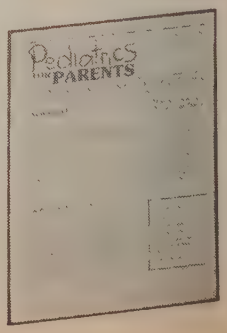
•

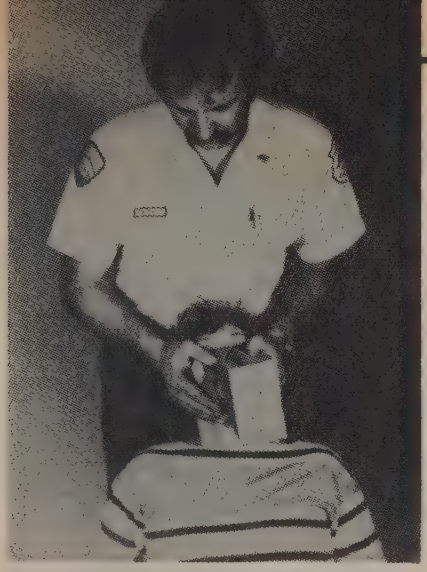
Dear PforP
My mother says I am harming my baby by not heating up his formula before feedings. I don't think it makes any difference. He takes the milk just as readily if it's straight from the refrigerator, at room temperature, or heated up. He burps as well and shows no ill effects from any temperature milk. What's your opinion on this.

Ms Jane Selig
Miami, FL

Dear Ms Selig,
I agree with you — heating of formula makes no difference. Some authorities feel that warm milk may increase the incidence of colic. Over heating may cause some breakdown in nutrients. (RJS)

Pediatrics for Parents
Richard J. Sagall, Editor
$15/year
(11 issues) from:
Pediatrics for Parents
Subscriber Services
176 Mount Hope Avenue
Bangor, ME 04401
207/942-6212





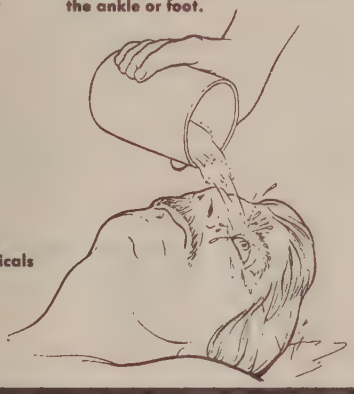
The typical hyperventilating patient can be helped by rebreathing CO_2 trapped in a paper bag.

The First Responder
(The critical first minutes!)
Richard L. Judd
and Dwight D. Ponsell
1982; 281 pp.
$19.95
postpaid from:
C. U. Mosby Company
11830 Westline
Industrial Drive
St. Louis, MO 63146
314/872-8370

A pillow can be used for a fracture of the ankle or foot.

The First Responder

During the nauseating frenzy of an emergency accident, I can recall visual instructions more accurately than words. This handbook, based on training for highway-patrol EMTs (Emergency Medical Technicians) has more pictures and graphics than ***Emergency Medical Guide*** *(**EWEC** p. 214), the standard, and more thorough, text on the subject. Does anyone know of a great First Aid course on video?* —*Kevin Kelly*



Procedure for flushing chemicals from eye.

AMA Handbook of Poisonous and Injurious Plants

Intended to be a quick-reference handbook, you can expect to find this in poison-control centers, personal libraries of botanists, and many walk-in emergency care centers springing up around the country.

The first third of the handbook is devoted to systemic plant poisoning. Plants are arranged alphabetically by scientific name. Each species or group of species lists family and common names, gives a brief descriptive overview, geographic distribution, toxic parts, toxins, symptoms, suggested management of poisoning, and reliable, current medical and botanical literature references. The rest of the book includes contact dermatitis, fungi poisoning, 437 color photographs, and a crisp, easy-to-use index. As a botanist, I keep this close by as a part of my working "peripheral brain" for daily use. —*Scott Kruse*

Table 1.
Inquiries to the Rochester, New York, Poison Control Center Concerning Ingestion of Plants By Children 1 Year of Age or Less By Frequency[1]

1. Philodendron	6. Dieffenbachia and Rubber Plant
2. Jade Plant	7. Asparagus Fern
3. Wandering Jew	8. Aloe
4. Swedish Ivy	9. String-of-Pearls
5. Spider Plant	10. Pothos

Philodendron species
Family: Araceae
Distribution: Philodendron grows outdoors in warm climates. It is probably the most popular house plant in the United States.

Toxic Part: The leaves are injurious.

Toxin: Raphides of calcium oxalate and questionable unidentified proteins.

Symptoms: Painful burning of the lips, mouth, tongue, and throat develop. Due to the rapid onset of pain, plant material is rarely swallowed. Contact dermatitis is common.

Management: The pain and edema recede slowly without therapy. Holding cool liquids or demulcents in the mouth may give some relief. The insoluble oxalate does not produce systemic poisoning in man.

AMA Handbook of Poisonous and Injurious Plants
Dr. Kenneth F. Lampe
and Mary Ann McCann
1985; 432 pp.
$24.95
($27.90 postpaid) from:
Chicago Review Press
814 N. Franklin Street
Chicago, IL 60610
312/337-0747
or Whole Earth Access

Philodendron.

Basic Cheese Kit

*The New England Cheesemaking Supply Co., purveyors of the authoritative books on home cheesemaking (**WER** #44, p. 65) have now come out with the easiest possible introduction to their hobby — a do-it-yourself basic cheese kit.*

Whether you're a country type with a goat out back or a city dweller confined to a condo this kit will be equally useful. The only requirement is an interest in the craft and a modest supply of milk, whether from the goat or the deli doesn't matter. The kit includes starter culture, rennet, a thermometer, a cheese mold and cheesecloth, plus instructions and recipes. Add your own energy and begin learning a new skill. —Dick Fugett

Basic Cheese Kit: $23.70 postpaid from New England Cheesemaking Supply Co., P. O. Box 85, Ashfield, MA 01330; 413/628-3808.

Warming and Ripening

Milk is always warmed indirectly by placing the pot of milk into a sink or large container of warm water. Milk should only be placed in a glass, stainless steel or enamel-lined pot. Since milk becomes acidic during cheesemaking, you do not want to use cast iron, aluminum, or zinc-coated utensils which can put harmful metallic salts into the cheese.

The milk is usually warmed to between 85 and 90 degrees. Freshly prepared cheese starter culture is added to the milk and allowed to acidify for a period of 45 minutes. This period is referred to as "ripening" the milk.

Arrow's Complete Guide to Mail Order Foods

*The Global Village now has a supermarket. **Arrow's Complete Guide to Mail Order Food** is a useful compendium for the adventurous cook, or for people who don't have access to the specialty and/or ethnic food stores that large cities provide. Each of the twelve chapters covers a specific group of foods available through the mail. Over 650 different mail order food companies are listed, and the book is double-indexed by company name and by product. As the author says in the preface, the book is for people who are looking for variety, for better quality, or just the unusual (the first entry in the index is alligator, the last is zebra).* —Jerry Hagins

Arrow's Complete Guide to Mail Order Foods
N. J. Kocs, Editor
1987; 157 pp.
$19.95
($20.95 postpaid) from:
Arrow Clearinghouse
Box 341
Ardmore, PA 19003

or Whole Earth Access

Czimer Foods
Route No. 10, Box 285
Lockport IL 60441
312-460-2210

game birds (pheasant, mallard, guinea, partridge, quail, wild turkey, Canada goose, muscovy duck, squab, grouse), game animals (venison, elk, reindeer, bear, pork, lion, buffalo, moose, eland, antelope, wild goat, zebra, llama, camel, alligator, beaver, rattlesnake, rabbit), smoked specialties

Gazin's
2910 Toulouse St., P.O. Box 19
New Orleans LA 70179
504-482-0302

New Orleans foods (coffee with chicory, beignet mix, French bread, Creole sauces, rice mixes, wild pecan rice, Creole mustard, canned seafood, chow chow, bread and biscuit mixes, soup mixes, cane syrup, pepper jellies, kiwi jams, relishes, Cajun seasonings, Creole spices), imported foods (pastas, sauces, vinegars, oils, mushrooms, souffle mixes, creme de marrons)

America's Pharmacy

Mail order all your prescription and non-prescription drugs. It's easy and the prices are good, better than all the local pharmacies I called. They'll let you order up to a six-month supply of your medication at one time, and when they've filled your last refill they'll automatically write your doctor requesting a new prescription. The catalog prices are postpaid U.P.S. or parcel post — it could take up to two weeks for delivery.
—Corinne Cullen Hawkins

Catalog free from America's Pharmacy, P. O. Box 10490, Des Moines, IA 50306; 800/247-1003.

THORAZINE 50 MG	TAB	27.83	CHLORPROMAZINE HCL 50MG	TAB	5.05
THORAZINE 100 MG	TAB	35.96	CHLORPROMAZINE HCL 100MG	TAB	5.99
THYROID 1/2GR	TAB	3.71	THYROID 1/2GR USP	TAB	1.76
THYROID 1GR	TAB	4.13	THYROID 1GR USP	TAB	1.86
THYROID 2GR	TAB	7.61	THYROID 2GR USP	TAB	1.96
TOFRANIL 10MG	TAB	17.02	IMIPRAMINE HCL 10MG	TAB	4.55
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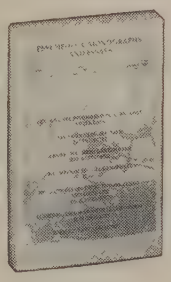
VALISONE LOTION 60ML	EA	22.24	B-METHASONE LT 0.1% 60ML	EA	14.19
VALISONE OINT 0.1% 45GM	EA	16.70	B-METHASONE OI 0.1% 45GM	EA	8.90
VALIUM 2MG	TAB	21.66	DIAZEPAM 2MG	TAB	9.98

Psychedelic Monographs and Essays

This young periodical attempts to referee the underground investigation into psychedelic drugs, now in a revival after a decade's lull. It flunks the measure for science journals, but passes the electric kool-aid acid test. Delivers hard-to-collect data if you can put up with interviews from old drug gurus. —Kevin Kelly



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In 5 years there were only 8 emergency room visits and one death reported to DEA involving MDMA, out of about 750,000 drug incidents. The few MDMA incidents probably involved overdoses. It's dangerous to take more than a standard dose or to mix drugs, and the results may show up quickly or only after several years or decades. So many drug deaths involve 2 or 3 drugs that it is CLEARLY DANGEROUS to take two drugs within 24 hours (unless both are prescribed by a physician together) or to take any drug and drink alcohol (which vastly intensifies drug absorption into the brain). There is no evidence at all of addiction to MDMA or dependency on it. However, when MDMA became popular in San Francisco and Texas, there were reports of people taking many doses in one day, and that MDMA's good effects reversed at high doses and could cause bad trips (as well as permanent brain damage).

•

Chemical investigations have confirmed lysergic acid amides are produced in several plants of the bindweed family including Baby Hawaiian Woodroses, which contain up to ten times the concentration of psychoactives as Morning Glories. Lysergic acid amides including chanclavine, ergine, isoergine and ergonovine are present in the psychoactive *Argyriea* species which include *speciosa, acuta, bernesii, capituata, osyrensis, wallichii, splendens, hainanensis, obtusifolia,* and *pseudorubicunda,* mainly concentrated in the seeds. The larger Hawaiian Woodrose, *Merrimia tuberosa* also produces such amides, but unlike the others it is not nearly as potent as the Baby Hawaiian Woodrose.

The Omni Whole Mind Newsletter

I am of two minds about this one. On the downside, it's pricey, and published by ***Omni*** *in hip sci-fi romanticism. On the upside, it's concise, broad (though seldom deep), and stimulating. Covering the same territory which the venerable* ***Brain/Mind Bulletin*** *(**EWEC** p. 384) has been prospecting for years, this one digs into the wide darkness we call the mind with more exuberance and gusto. They typically point me to something to follow up on, and bless 'em, they provide access information.* —Kevin Kelly

•

Using themselves as guinea pigs, a handful of neuroscientists at the State University of New York's Health Science Center have been bravely exposing their brains to strong magnetic fields and observing what happens.

In one experiment, the scientists placed a magnetic coil, shaped like a flat, palm-sized donut, over the backs of their heads where the occipital lobes interpret visual information. As the magnetic pulse beamed into the underlying brain tissue, it caused transient electrical changes in the scientists' neurons. But what did it *feel* like?

"It's very hard to describe," says Paul Maccabee. In this experiment the pulse was applied about a tenth of a second after the scientists saw letters flash on a computer screen. "You're essentially blind," Maccabee notes. Others described a strange confusion or a perceptual blank. Essentially, the electromagnetic field had interrupted a brain process — in this case, visual processing — for a fraction of a second.

•

On October 30, at the Kennedy Center in Washington, D.C., the National Symphony Orchestra will present a concert of music composed entirely by manic-depressives.

The program, not yet set at this writing, will have many composers to choose from, including Berlioz, Tchaikovsky, Handel (so unpredictable he was said to have a "head full of maggots"), Schumann (who during a manic four-day period once wrote 130 songs), and songwriter Hugh Wolf (who avowed he "led the existence of an oyster" for years at a time).

•

In a glass dish in a National Institutes of Health laboratory in Washington lies what may be a harbinger of 21st-century brain repair. Saturated in a nutrient solution, a clump of living brain cells from a rat fetus grows directly onto an electronic computer chip.

The idea, says NIH neurobiologist Richard Wyatt, is to use the computer chip to "eavesdrop" on the electrical conversations that take place among brain cells — to learn "the electric language of the brain." Once that language is learned, the chip could also act as a bridge between brain cells, passing electrical signals back and forth like a sort of switchboard.

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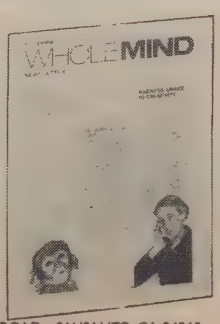


THE MATERIAL BASIS OF EMOTIONS:

BY CANDACE PERT

The binding tie between body and mind is a dialog of opiate chemicals

I AM GOING TO DESCRIBE AN ARRAY of fascinating, mostly new findings about the chemical substances in the body called neuropeptides. Based on these findings, I am going to suggest that neuropeptides and their receptors form an information network within the body. Perhaps this suggestion sounds fairly innocuous, but its implications are far-reaching:

I believe that neuropeptides and their receptors are a key to understanding how mind and body are interconnected and how emotions can be manifested throughout the body. Indeed, the more we know about neuropeptides, the harder it is to think in the traditional terms of a mind and a body. It makes more and more sense to speak of a single integrated entity, a "body-mind."

Most of what I will describe are laboratory findings, hard science. But it is important to remember that the scientific study of psychology traditionally focuses on animal learning and cognition. This means that if you look in the index of recent textbooks on psychology, you are not likely to find a listing for "consciousness," "mind," or even "emotions." These subjects are basically not in the realm of traditional experimental psychology, which primarily studies *behavior* because it can be seen and measured.

The Specificity of Receptor Sites

There is one field in psychology where mind — at least consciousness — has been objectively studied for perhaps twenty years. This is the field of psychopharmacology wherein researchers have developed highly rigorous ways to measure the effects of drugs and altered states of consciousness.

Research in this field evolved from an assumption that no drug acts unless it is "fixed" — that is, somehow gets attached to the brain. And so researchers initially imagined hypothetical tissue constituents to which a drug might bind — much the way a key fits a lock — and they called these "receptors." In this way, the notion of specific brain receptors for drugs became a central theory in pharmacology. It is a very old idea.

In the past several years, a critical development has been the invention of new technologies for actually binding drugs to these receptor molecules and for studying both their distribution in the brain and body and their actual molecular structure.

My initial work in this area was in the laboratory of Solomon Snyder at Johns Hopkins University, where we focused our attention on opium, a drug that obviously alters consciousness and that also is used medicinally to alleviate pain. I worked long and hard, over many months of initial failure, to develop a technical system for measuring the material in the brain with which opium interacts to produce its effects. To make a long (and technical) story short, we used radioactive drug molecules, and with this technology were actually able to identify the receptor element for

More psycho-drugs. We won't ever see the last of these troublesome substances since they are proving to be the underlying communication system for such ordinary activities as reading this sentence. One of the hottest researchers in this chemical world is Candace Pert, who has been poking around the brain, the immune system, and lately the AIDS virus. She is chief of brain biochemistry, Clinical Neuro-Science Branch, National Institute of Mental Health, Bethesda, Maryland. This article was presented as a talk at the Symposium on Consciousness and Survival, sponsored by the Institute of Noetic Sciences. It was adapted by Harris Dienstfrey for an article in Advances, *Vol. 3, No. 3, Summer 1986, and further revised for the Spring 1987* Noetic Sciences Review. *—Kevin Kelly*

The face of pleasure: Candace Pert's autoradiographic map of opiate receptor sites in a rat brain. The receptors, activated with an injected opiate drug "labeled" with radioactivity, glow in this cross-section of brain as shades of white and gray against the unactivated black background. The complex pattern of receptor density and distribution provides hints about the way the brain "filters" reality. (Courtesy of Dr. Candace Pert, NIMH.)

opium in the brain. You can imagine, therefore, a molecule of opium attaching itself to a receptor — and then from this small connection, large changes follow.

It next turned out that the whole class of drugs to which opium belongs — they are called opiates and they include morphine, codeine, and heroin, as well as opium — attach to the *same* receptors. Further, we discovered that the receptors were scattered throughout not only the brain but also the body.

After finding the receptor for the external opiates, our thinking took another step. If the brain and the other parts of the body have a receptor for something taken from *outside* the body it makes sense to suppose that something produced *inside* the body also fits the receptor. Otherwise, why would the receptor be there?

This perspective ultimately led to the identification of one of the brain's own forms of opiates, a chemical substance called beta endorphin. Beta endorphin is created in the brain's own nerve cells and consists of peptides — thus it is a neuropeptide. Furthermore peptides grow directly off the DNA which stores the information to make our brains and bodies.

If you picture an ordinary nerve cell, you can visualize the general mechanism. In the center (as in any cell) is the DNA, and a direct printout of the DNA leads to the production of a neuropeptide, which then traverses down the axons of the nerve cell to be stored in little balls at the end waiting for the right electrophysical events that will release it. The DNA also leads to the production of receptors, which are made out of the same peptide material but are much bigger. What has to be added to this picture is the fact that 50 to 60 neuropeptides have been identified, each of them as specific as the beta endorphin neuropeptide. We have here an enormously complex system. ►

Until quite recently, it had been thought that the information of the nervous system was distributed across the gap between two nerve cells, called the synapse. This meant that the proximity of the nerve cells determined what could be communicated.

But now we know that the largest portion of information coming from the brain is kept straight not by the close physical juxtaposition of the nerve cells, but by the specificity of the receptors. What was thought of as a highly rigid linear system appears to be one with far more complex patterns of distribution.

Thus when a nerve cell squirts out opiate peptides, the peptides can act "miles" away at other nerve cells. The same is true of all neuropeptides. At any given moment, many neuropeptides may be floating along within the body, and what enables them to attach to the correct receptor molecules is, to repeat, the specificity of the receptors. *Thus, the receptors serve as the mechanism that sorts out the information exchange in the body.*

The Biochemistry of the Emotions

What is this leading up to? To something very intriguing — the notion that the receptors for the neuropepides are in fact the keys to the biochemistry of emotion. In the last two years, the workers in my lab have formalized this idea in a number of theoretical papers, and I am going to review briefly the evidence to support it.

I should say that some scientists might describe this idea as outrageous. It is not, in other words, part of the established wisdom. Indeed, coming from a tradition where the textbooks do not even contain the word "emotions" in the index, it was not without a little trepidation that we dared to start talking about the biochemical substrate of emotions.

I will begin by noting a fact that neuroscientists have agreed on for a long time: that emotions are mediated by the limbic system of the brain. The limbic system refers to a section of neuroanatomical parts of the brain which include the hypothalamus (which controls the homeostatic mechanism of the body and is sometimes called the "brain" of the brain), the pituitary gland (which regulates the hormones in the body), and the amygdala. We will be talking mostly about the hypothalamus and the amygdala.

The experiments showing the connection between emotions and the limbic system were first done by Wilder Penfield and other neurologists who worked with conscious, awake individuals. The neurologists found that when they used electrodes to stimulate the cortex over the amygdala they could evoke a whole gamut of emotional displays — powerful reactions of grief, of pain, of pleasure associated with profound memories, and also the total somatic accompaniment of emotional states. The limbic system was first identified, then, by psychological experiments.

Now when we began to map the location of opiate receptors in the brain we found that the limbic system was highly enriched with opiate receptors (and with other receptors too, we eventually learned). The amygdala and the hypothalamus, both classically considered to be the main components of the limbic system, are in fact blazing with opiate receptors — 40-fold higher than in other areas of the brain.

These "hot spots" correspond to very specific nuclei or cellular groups that physiological psychologists have identified as mediating such processes as sexual behavior, appetite, and water balance in the body. The main point is that our receptor-mapping confirmed and expanded in important ways the psychological experiments that defined the limbic system.

Now let me bring in some other neuropeptides. I have already noted that 50 to 60 substances are now considered to be neuropeptides. Where do they come from? Many of them are the natural analogs of psychoactive drugs. But another major source — very unexpected — is hormones. Hormones historically have been conceived of as being produced in glands — in other words, not by nerve cells. A hormone presumably was stored in one place in the body, then traveled over to its receptors in other parts of the body. The prime hormone is insulin, which is secreted in the pancreas. But, now, it turns out that insulin is not just a hormone. In fact, insulin is a neuropeptide, made and stored in the brain, and there are insulin receptors in the brain. When we map insulin, we again find hot spots in the amygdala and hypothalamus. *In short, it has become increasingly clear that the limbic system, the seat of emotions in the brain, is also the focal point of receptors for neuropeptides.*

Another critical point. As we have studied the distribution of these receptors, we have found that the limbic system is not just in the forebrain, in the classical locations of the amygdala and the hypothalamus. It appears that the body has other places in which many different neuropeptide receptors are located — places where there is a lot of chemical action. We call these spots *nodal points,* and they are anatomically located at places that receive a lot of emotional modulation.

One nodal point is the dorsal (back) horn of the spinal cord, which is the spot that sensory information comes in. This is the first synapse within the brain where touch-sensory information is processed. We have found that for virtually all the senses for which we know the entry area, the spot is always a nodal point for neuropeptide receptors.

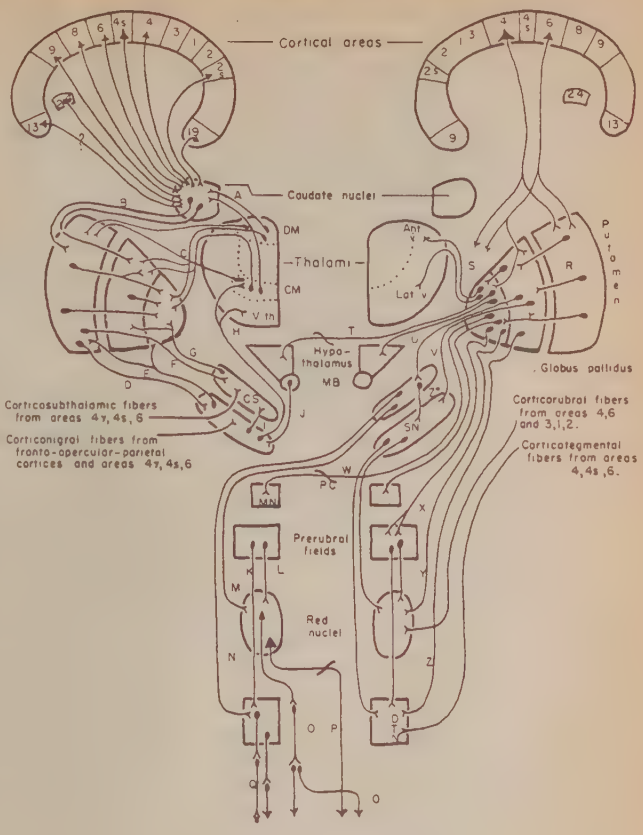
I believe these findings have amazing implications for understanding and appreciating what emotions do and what they are about. Consider the chemical substance angiotensin, another classical hormone which is also a peptide and now shown to be a neuropeptide. When we map for angiotensin receptors in the brain, we again find little hot spots in the amygdala. It has long been

known that angiotensin mediates thirst, so if one implants a tube in the area of a rat's brain that is rich with angiotensin receptors and drops a little angiotensin down the tube, within ten seconds the rat will start to drink water, even if it is totally sated with water. So, chemically speaking, angiotensin translates as an altered state of consciousness, a state that makes animals (and humans) say, "I want water." In other words, neuropeptides bring us to a state of consciousness and to alterations in those states.

Equally important is the fact that neuropeptide receptors are not just in the brain, they are also in the body. We have mapped and shown biochemically that there are angiotensin receptors in the kidney identical to those in the brain, and in a way that is not yet quite understood, the kidney-located receptors conserve water. The point is that the release of the neuropeptide angiotensin leads both to the behavior of drinking and to the internal conservation of water. Here is an example of how a neuropeptide — which perhaps corresponds to a mood state — can integrate what happens in the body with what happens in the brain. (A further important point that I only mention here is that overall integration of behavior seems designed to be consistent with survival.)

My basic speculation here is that neuropeptides provide the physiological basis for the emotions. As my colleagues and I argued in a recent paper in the *Journal of Immunology:* The striking pattern of neuropeptide receptor distribution in mood-regulating areas of the brain, as well as their role in mediating communication through the whole organism, makes neuropeptides the obvious candidates for the biochemical mediation of emotion. It may be too that each neuropeptide biases information processing uniquely when occupying receptors at nodal points with the brain and body. If so, then each neuropeptide may evoke a unique "tone" that is equivalent to a mood state.

In the beginning of my work, I matter-of-factly presumed that emotions were in the head or the brain. Now I would say they are really in the body as well. They are expressed in the body and are part of the body. I can no longer make a strong distinction between the brain and the body.



Schematic diagram of the computing centers and communications pathways of the extrapyramidal motor system in the human brain. Removal of the upper Cortical areas, where conscious thinking takes place, has little effect on the circuit of information required for the equally complex computations needed for walking and maintaining equilibrium. The pathways show the routes of chemical chain reactions and electric-like impulses. (From *Brains, Behaviors, and Robots* by James Albus, Byte Books, NY.)

Communicating with the Immune System

I now want to bring the immune system into this picture. I have already explained that the hormone system, which historically has been studied as being separate from the brain, is conceptually the same thing as the nervous system. Packets of juices are released and diffuse very far away, acting via the specificity of receptors at sites far from where the juices are stored. So, endocrinology and neuroscience are two aspects of the same process. Now I am going to maintain that immunology is also part of this conceptual system and should not be considered a separate discipline.

A key property of the immune system is that its cells move. They are otherwise identical to the stable brain cells, with their nuclei, cell membranes and all of the receptors. Monocytes, for example, which ingest foreign organisms, start life in your bone marrow, and they then diffuse out and travel through your veins and arteries, and decide where to go by following chemical clues. A monocyte travels along in the blood and at some point comes within "scenting" distance of a neuropeptide, and because the monocyte has receptors for the neuropeptide on its cell surface, it begins literally to chemotax, or crawl, toward that chemical. This is very well documented, and there are excellent ways of studying it in the laboratory.

Now, monocytes are responsible not just for recognizing and digesting foreign bodies but also for wound healing and tissue-repair mechanisms. What we are

talking about, then, are cells with vital, health-sustaining functions.

The new discovery I want to emphasize here is that *every* neuropeptide receptor that we have looked for (using an elegant and precise system developed by my colleague, Michael Ruff) is also on human monocytes. Human monocytes have receptors for opiates, for PCP, for another peptide called bombasin, and so on. *These emotion-affecting biochemicals actually appear to control the routing and migration of monocytes, which are so pivotal in the immune system.* They communicate with B-cells and T-cells, interact in the whole system to fight disease and to distinguish between self and non-self, deciding, say, which part of the body is a tumor cell to be killed by natural killer cells, and which parts need to be restored. I hope this picture is clear to you.

A monocyte is circulating — this health-sustaining element of the immune system is traveling in the blood — and then the presence of an opiate pulls it over, and it can connect with the neuropeptide because it has the receptor to do so. It has, in fact, many different receptors for different neuropeptides.

It turns out, moreover, that the cells of the immune system not only have receptors for these various neuropeptides; as is becoming clear, they also make the neuropeptides themselves. There are subsets of immune cells that make beta endorphins, for example, and the other opiate peptides. In other words, these immune cells are making the same chemicals that we conceive of as controlling mood in the brain. They control the tissue integrity of the body, and they also make chemicals that control mood. Once again, brain and body.

The Unity of the Variety

The next point I am going to make about the neuropeptides is an astounding one, I think.

As we have seen, neuropeptides are signaling molecules. They send messages all over the body (including the brain). Of course, to have such a communications network, you need components that can talk to each other and listen to each other. In the situation we are discussing here, the components that "talk" are the neuropeptides, and the components that "hear" are the neuropeptide receptors. How can this be? How can 50 to 60 neuropeptides be produced, float around, and talk to 50 or 60 types of listening receptors which are on a variety of cells? Why does order rather than chaos reign?

The finding I am going to discuss is not totally accepted, but our experiments show that it is true. I think that it is only a matter of time before everybody can confirm these observations.

There are thousands of scientists studying the opiate receptors and the opiate peptides, and they see great heterogeneity in the receptors. They have given a series of Greek names to the apparent heterogeneity. However, all the evidence from our lab suggests that in fact *there is actually only one type of molecule in the opiate receptors, one long polypeptide chain whose formula you can write.* This molecule is quite capable of changing its conformation within its membrane so that it can assume a number of shapes.

I note in passing that this interconversion can occur at a very rapid pace — so rapid that it is hard to tell whether it is one state or another at a given moment in time. In other words, receptors have both a wave-like and a particulate character, and it is important to note that information can be stored in the form of time spent in different states.

As I said, the molecular unity of the receptors is quite amazing. Consider the tetrahymena, a protozoa that is one of the simplest organisms. Despite its simplicity, the tetrahymena can do almost everything we can do — it can eat, have sex, and of course it makes the same neuropeptide components that I have been talking about. The tetrahymena makes insulin. It makes beta endorphins. We have taken tetrahymena membranes and in particular studied the opiate receptor molecules on them; and we have studied the opiate receptor in rat brains and on human monocytes.

We believe that we have shown that the molecular substance of *all* opiate receptors is the same. The actual molecule of the human-brain opiate receptor is identical to the opiate receptor components in that simplest of animals, the tetrahymena. I hope the force of this is clear. The opiate receptor in my brain and in your brain is, at root, made of the same molecular substance as that of the tetrahymena.

This finding gets to the simplicity and the unity of life. It is comparable to the four DNA-based pairs that code for the production of all the proteins, which are the physical substrates of life. We now know that in this physical substrate there are only 60 or so signal molecules, the neuropeptides, that account for the physiological manifestation of emotions — for enlivening emotions, if you will, or perhaps better yet, for flowing energy. The protozoa form of the tetrahymena indicates that the receptor molecules do not become more complex as an organism becomes more complex: *The identical molecular components for information flow are conserved throughout evolution. The whole system is simple, elegant, and it may very well be complete.*

Is the Mind in the Brain?

We have been talking about mind, and the question arises: Where is it? In our own work, consciousness has come up in the context of studying pain and the role of opiate receptors and endorphins in modulating pain. A lot of labs are measuring pain, and we would all agree that the area called periaqueductal gray, located around the third ventricle of the brain, is filled with opiate receptors, making it a kind of control area for pain. We have found that the periaqueductal

Mind As Information

What do these kinds of connections between brain and body mean? Ordinarily they are referred to as "the power of the mind over the body." As far as I am concerned, that phrase does not describe what we are talking about here. I would go further. We are all aware of the bias built into the Western idea that consciousness is totally in the head. I believe the research findings I have described indicate that we need to start thinking about how consciousness can be projected into various parts of the body. When we document the key role that the emotions, expressed through neuropeptide molecules, play in affecting the body, it will become clear how emotions can be a key to the understanding of disease. Unfortunately, people who think about these things do not usually work in a government laboratory.

My argument is that the three classic areas of neuroscience, endocrinology, and immunology, with their various organs — the brain (which is the key organ that the neuroscientists study), the glands, and the immune system (consisting of the spleen, the bone marrow, the lymph nodes, and of course the cells circulating through the body) — that these areas are actually joined to each other in a bi-directional network of communication and that the information "carriers" are the neuropeptides. There are well-studied physiological substrates showing that communication exists in both directions for every single one of these areas and their organs. Some of the research is old, some of it is new.

The word I would stress in regard to this integrated system is network, which comes from information theory. For what we have been talking about all along is *information.* In thinking about these matters, then, it might make more sense to emphasize the perspective of psychology — rather than of neuroscience. A mind is composed of information, and it has a physical substrate, which is the body and the brain; and it also has another immaterial substrate that has to do with information flowing around:

Perhaps, then, mind is the information flowing among all of these bodily parts. Maybe mind is what holds the network together.

—Candace Pert

gray is also loaded with receptors for virtually all the neuropeptides that have been studied.

Now, everyone knows that there are yogis who can train themselves so that they do or do not perceive pain, depending on how they structure their experience. Women in labor do the same thing. What seems to be going on is that these sorts of people are able to plug into their periaqueductal gray. Somehow they gain access to it — with their consciousness, I believe — and set pain thresholds. Note what is going on here. In these situations, a person has an experience that brings with it pain, but a part of the person consciously does something so that the pain is not felt. Where is this consciousness coming from — this conscious I — that somehow plugs into the periaqueductal gray so that he or she does not feel a thing?

I want to go back to the idea of a network. A network is different from a heirarchical structure which has one top place. You theoretically can plug into a network at any point and get to any other point. A concept like this seems to me valuable in thinking about the processes by which a consciousness can manage to reach the periaqueductal gray and use it to control pain.

The yogi and the laboring woman both use a similar technique to control pain — breathing. Athletes use it, too. Breathing is extremely powerful. I suggest that there is a physical substrate for these phenomena, the brain stem nuclei. I would say that we now must include the brain stem nuclei in the limbic system because they are nodal points, thickly encrusted with neuropeptide receptors and neuropeptides.

The idea, then, goes like this: breathing has a physical substrate which is also a nodal point, this nodal point is part of an information network in which each part leads to all the other parts, and so, from the nodal point of the brain stem nuclei, the consciousness can, among other things, plug into the periaqueductal gray.

I think it is possible now to conceive of mind and consciousness as an emanation of emotional information processing, and as such, mind and consciousness would appear to be independent of brain and body.

Can Mind Survive Physical Death?

One last speculation, an outrageous one perhaps, but on the theme I was asked to consider for this symposium on "Survival and Consciousness." Can the mind survive the death of the physical brain? Perhaps here we have to recall how mathematics suggests that physical entities can suddenly collapse or infinitely expand. I think it is important to realize that information is stored in the brain, and it is conceivable to me that this information could transform itself into some other realm. The DNA molecules surely have the information that makes the brain and body, and the bodymind seems to share the information molecules that enliven the organism. Where does the information go after the destruction of the molecules (the mass) that compose it? Matter can neither be created nor destroyed, and perhaps biological information flow cannot just disappear at death and must be transformed into another realm. Who can rationally say "impossible"? No one has yet mathematically unified gravitation field theory with matter and energy. The mathematics of consciousness has not even been applied. The nature of the hypothetical "other realm" is currently in the religious or mystical dimension, where Western science is clearly forbidden to tread. ■

THE CHECKMATE PROPOSAL

BY THEODORE HOLM NELSON

illustration by Kristen Throop

A Plan For Partial Containment Of The AIDS Epidemic

The Plan In Brief

AIDS, the fatal new venereal disease, confounds public health measures by its long incubation period before symptoms (often three years or more). Sexual motivations, intense and mysterious, likewise confound the issue; millions of people are continuing to take chances in their sexual encounters, and more and more are becoming infected.

Disturbingly, many people do not want to know whether they carry the virus. And most disturbingly, a few willful infectors are spreading the virus intentionally.

There exist fairly reliable AIDS tests, but no clear way to use them to benefit the population at large. Many oppose *any* testing, on various grounds. Most proposals for mass AIDS testing are adversarial and propose huge registries of the infected — almost impossible to maintain and unlikely to have much preventive effect. And politicians (possibly fishing for dictatorial powers) are calling for mass testing and quarantine.

Here is a reasoned alternative, somewhat different from the usual way of thinking. We believe all persons of good will can unite in agreement on this new method.

The Checkmate Proposal is a design for a system and a campaign: a campaign in which all may participate, without blame or visible virtue, uniting to stop the plague by a sexual contact curtain between the infected and those still free from the virus.

We propose a specific type of testing center and a particular way of presenting the test results.

The plan does not seek to pursue the carriers, which is hopeless; it is a method by which individuals may protect themselves. Under the plan it cannot be prov-

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The always-tangled problem of protecting the integrity of an individual who has a contagious illness, while protecting society's public need to contain the infection, has knotted itself into a standstill in the case of the socially misunderstood disease of AIDS. Into this deadlock, Ted Nelson has slipped an alternative. I have my own doubts about its practicality (many on staff here think the proposal silly), but I am intrigued by his suggestion that this community issue might be helped by a communication solution. As the inventor of the information structure known as hypermedia (and author of "Computer Lib," reviewed on p. 72), Ted has framed the problem in information terms. He proposes a device that serves up user-controlled confidentiality, and at the same time serves public acknowledgment for participation. There may be other ways to implement his algorithm, and other ways to deal with AIDS testing. Consider this a first loop. —Kevin Kelly

en that any individual has failed* the AIDS test; but those who pass the test may prove it, in private, to potential spouse or intimate. Thus its name, the Checkmate Plan.**

1. Instant Participation

Anyone may participate instantly in the Checkmate Plan; all are welcome. The plan is open to the old, the very young, husbands, wives, priests and great-grandparents, as well as to high-risk groups.

To participate in the plan, you simply wear the Membership Pendant to show support of the program and remind everyone who sees it of the danger. The Membership Pendant bears the Checkmate symbol and these words, in any language:

STOP THE SPREAD OF AIDS
WITH A CONTACT CURTAIN

You may buy such a pendant, make one, or obtain one by being tested at one of the special testing centers proposed in the plan.

2. The Secret Of Success

There is a second kind of pendant. A person who passes the AIDS test receives the passing pendant, a pendant which may be opened. This contains the person's picture, the words NO AIDS and the date, and a verification code allowing this to be confirmed by telephone.

This fact of passing the test is secret and private information, under control of the person who has passed. The passing pendant cannot be distinguished from the membership pendant except by opening it.

If you fail the test, and are found to be carrying the AIDS virus, you are issued an ordinary membership pendant, and the testing center destroys any evidence of your test. There is no evidence of failure. Thus failure too is a secret, similarly under the control of the person who failed.

3. The Intimate Inquiry

Persons who are contemplating marriage, or other intimate contact, may ask to see the contents of the other's pendant. This is a private matter; you only show it in return for seeing someone else's.

There are several possible outcomes.

A. Both learn that they have passed the test. Subject to certain qualifications, they have grounds for believing they may have a safe relationship.

B. Only one has passed the test. This encounter is the center of the system. The one who has passed will see immediate grounds for caution, and may choose not to become intimately involved with the other.

C. Neither has passed the test. If neither pendant opens, either party may be an AIDS carrier, and may know it or not know it. Thus for this pair the situation is exactly as it is now, without the system.

If both know themselves to be AIDS carriers, this leads to a special case with other benefits: they may communicate this by a succession of hints; and they may also choose to continue the involvement in the light of that knowledge.

4. It Means What It Means

Additional complications result from the fact that the AIDS test has a seroconversion delay, not necessarily showing the presence of the disease for several months. Under the system this can be dealt with by common sense, taking into consideration the length of time since a possible exposure may have occurred. This requires trust and knowledge of the other person. Reasonable caution could involve waiting a number of months, and then retesting, before intimacy. (The person who presents several passing pendants can give some indication of having been consistently concerned about AIDS over a period of time.)

The system is not perfect because the test is not perfect. Intimacy will always be a matter of judgment and risk (because of such problems as false negative, seroconversion period, and the possible risk-taking behavior of the wearer), but at least intimacy becomes subject to the best evidence available, while no one is penalized either for carrying the AIDS virus or for not taking the test.

5. Pressure For Testing

This system is designed to draw more and more people into itself. Public visibility of the pendants creates pressure to wear pendants.

The wearing of the pendant, in turn, creates psychological pressure to be tested: casual participants, who begin only by wearing the membership pendant to be supportive or accepted, will feel a pressure to be tested — particularly if they hope for closeness to persons who have passed.

6. "None Of Your Business"

If anyone unwelcome asks to examine your pendant, the answer is "None of your business." No one has a right to see if your pendant opens.

The system is based on testing status remaining a private fact; if you want the system to work, you will help remind everyone of that. To reveal that you have passed will cheapen the system. (If everyone who passed were to reveal it, the system would break, but there is reason to expect mutual agreement on maintaining this ethic.)

7. The Moral Issue

Some people talk as if "morality" is chiefly concern-

* Note: the terms "positive" and "negative" are confusing to many people in this context, since a "positive AIDS test means bad news and a "negative" AIDS test means good news; the frequent use of these terms can make reasoning difficult. Thus we are avoiding the use of the terms "positive" and negative" entirely.

** TRADEMARK NOTICE. The system described here requires an international trademark for recognition and certification of services under supervision of a nonprofit body. Subject to legal investigation, we claim the service mark "Checkmate" for the disease-control plan which we offer here, until such a service mark can be transferred to such a body.

© 1988 The Checkmate Committee.

ed with what sexual acts people perform, and whether the people are married or not. Such concerns are of no consequence today and must be set aside at once. *Today's moral issue is not to expose any more people to the AIDS virus.*

Therefore morality consists in finding a system which will be the most effective in preventing the spread of the disease.

Any distraction based on disapproval of people's sex acts is totally irrelevant. This system is unbiased as to sexual practices. It is in everyone's vital interest that even the most disdained — however promiscuous, and perpetrating whatever practices — not be infected. For more people to be infected increases the universal risk.

8. The Best Use Of The Only Evidence

The only direct evidence possible as to one's AIDS status is the AIDS antibody test. The Checkmate system proposes a method for presenting test results only to those with a need to know.

This system consists of a public participation token and a private disclosure token. It (1) permits the evidence to be used to verify the safety of possible intimacy; but (2) prevents the use of this information to stigmatize others, either those who carry the virus or those who have not taken the test.

We propose that this system, by providing beneficial information to motivated individuals rather than derogatory information to adversary bureaucracies (which must spend huge amounts of money on enforcement) will make by far the best use of the information and get the most payoff from the testing resources.

9. The Sense Of Danger And Hope

This plan should not give anyone a feeling of safety, but should foster a sense of hope.

All parties in society can benefit from this system in different ways, and all persons of good will should be able to support it without conflict. The system should spread public awareness of the problem and alertness to it. The system should increase everyone's caution, making everyone constantly aware of the danger that is now everywhere. It should reduce the taking of chances, implicitly urging everyone *not* to take chances, but also providing the best information when they do.

Someone who has passed the test is given tangible evidence of a priceless asset — the state of being free from the AIDS virus. This person is constantly reminded of the asset and its value, every time he or she puts on the pendant, or feels it, or sees it. And under the system, this asset can be defended without wholly curtailing romance or the seeking of suitable mates.

10. A Plan For The People

Governments and police cannot find and control the growing millions who carry the virus. Writing down people's names does nothing to halt the spread.

We propose a method by which individuals may protect themselves, using the best evidence.

Let governments do what they will; this is a plan for the people, whereby individuals may strive to protect themselves and others. ■

AIDS Resources

Two sources for the most up-to-the-minute information on AIDS.

***AIDS Treatment News** is a biweekly newsletter best described by its own statement of purpose. "**AIDS Treatment News** reports on experimental and alternative treatments, especially those available now. It collects information from medical journals, and from interviews with scientists, physicians and other health practitioners, and persons with AIDS or ARC. Long-term AIDS survivors have usually tried many different treatments, and found combinations which work for them. [We do] not recommend particular therapies, but seek to increase the options available. We will also examine the ethical and public-policy issues around AIDS treatment research."*

The second item, the A.I.D.S. Catalog, sells an astounding collection of resources by mail. Beside the expected range of books, they also stock complete sets of cassette tapes from the last National AIDS Conference, a selection of educational videos, on-line bibliographies (extremely valuable for research), and AIDS pamphlets in bulk.

AIDS Treatment News
John S. James, Editor
$100/year (26 issues)
($32 for persons with AIDS or ARC) from:
ATN Publications
P. O. Box 411256
San Francisco, CA 94141
415/255-0588

The A.I.D.S. Catalog
$1 from:
A.I.D.S. International
P. O. Box 2008
Saratoga, CA 95070
408/866-6303

*The very short half-life of AIDS research has outpaced the usefulness of established avenues of science reporting. The dinosaur gait of publishing in most journals (two to eight months' lead time) has led researchers to rely instead on a home-brewed library of electronic bibliographies, newsletters like the **Morbidity and Mortality Weekly Report**, computer networks, and a slew of "grey literature" — unofficial papers handed out before publication for "review." **AIDS Treatment News** and several other quick-turnaround newsletters featured in the A.I.D.S. Catalog are by far the freshest taps on the wide stream of AIDS lore.* —*Kevin Kelly*

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Many "AIDS deaths" are in fact unnecessary. For example, even in San Francisco many people known to be at risk for pneumocystis die of it without having had any preventive treatment — despite an editorial in the *New England Journal of Medicine* (October 15, 1987) that persons at risk should receive such treatment. And an article in the same issue of the *Journal* showed that a "salvage" therapy with two experimental drugs (trimetrexate and leucovorin) saved the lives of over two thirds of the patients for whom the standard drugs had failed. This new treatment has almost no side effects. Yet how many persons with pneumocystis have access to it?

Apparently two thirds or more of the deaths from pneumocystis could now be prevented if safe, effective (though officially experimental) treatments were used when appropriate. The basic problem is the lack of uniform standards of care. And there has been *almost no advocacy* from gay political organizations (or AIDS service groups or even gay physicians' organizations) on such matters.
—*AIDS Treatment News*, Feb. 26, 1988

Psychological and Behavioral Treatments for Medical Disorders

Those who criticize Western medicine for neglecting the psychological aspects of illness will welcome this excellent series of annotated bibliographies. By compiling well-written summaries of hundreds of journal articles in the fields covered, the editors provide the best available overview of our current knowledge on how thoughts and emotions can contribute to disease.

Volume I reviews the contributions of the psyche to high blood pressure, heart disease, and vascular disorders. Volume II covers asthma and other allergic disorders, hemophilia and other blood disorders, diseases of the skin, and cancer. Volumes I and II contain 916 and 1,479 entries, respectively. One quibble: good as these books are, the prices seem high. You may wish to pass this review on to your favorite librarian.

As these excellent volumes make clear, the psychosomatic approach means not that you consider the body less, but that you study the psyche more. The editors and the Institute for the Advancement of Health deserve our thanks for making this important information available in such a readable and useful form. —Tom Ferguson, M.D.

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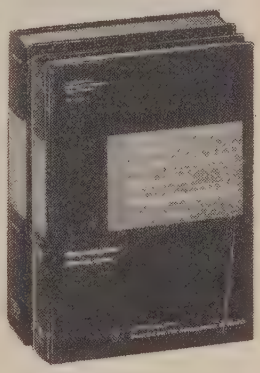
947
Dudek SZ. *Suggestion and play therapy in the cure of warts in children: a pilot study.* J Nerv Ment Dis 145:37-42, 1967.

► play therapy, placebo, suggestion

Treatment of warts using a combination of play therapy, placebo medication, and suggestion was attempted with 24 children brought to a skin clinic for the surgical removal of warts. 20 were seen to completion of therapy. Treatment was administered under 2 techniques: (1) suggestive therapy combined with threat of surgery on 2nd visit (provided no warts had shown curative changes), and (2) suggestion without threat of surgery. A total of 10 cases completely lost their warts, 4 lost only some prior to discharge, and 6 cases were unchanged within the set time limit. The average cure rate was 7 wks. Adequacy of emotional rapport may be a relevant factor in effecting cure. While it seems valid to infer that psychological factors were instrumental in effecting somatic change, it is not at all clear what parts placebo medication and emotional variables played. Further research in this area is recommended. —*Treatments for Disorders Associated with the Immune System*

Psychological and Behavioral Treatments
(Vol. 1: For Disorders of the Heart and Blood Vessels)
Mady Horning-Rohan and Steven E. Locke
1985; 179 pp.
$45
($47.50 postpaid).

(Vol. II: For Disorders Associated with the Immune System)
Steven E. Locke
1986; 306 pp.
$65
($67.50 postpaid).



Both from:

The Institute for the Advancement of Health
16 E. 53rd Street/5th Floor
New York, NY 10022 212/832-8282

Witchdoctors and Psychiatrists

There are over 250 different forms of psychotherapy in the U.S. alone, ranging from psychoanalysis (talking cure) to primal screaming and bioenergetics. Which ones work? Oddly enough, they all do — to one degree or another. Torrey explains why.

What's therapeutic about therapy? Torrey breaks it down to four criteria: shared world view, client's expectations, the personal characteristics of the therapist (this is a big one) and an emerging sense of mastery. I thought this was too reductive at first, then it dawned on me: here's the unified field theory *of psychotherapy, a simple elegant model that explains the therapeutic process. Whether the therapist is a shaman practicing trance or a Jungian analyst using free association doesn't matter. The particulars of technique are beside the point.*

Torrey aims to expose the ethnocentrism in the belief that Western psychiatry is science and therapy in other cultures is superstition. Along the way he shreds the hoopla of trendy true-believer new age psychotherapies.
—Corinne Cullen Hawkins

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The main function of therapists in all cultures is to treat illness. In our culture we distinguish rather sharply between physical illness and mental illness, and we have separate therapists for each. A psychiatrist, for instance, is not expected to treat a case of pneumonia. Most other cultures do not make such a sharp distinction, with the result that therapists in these cultures treat a wide variety of physical as well as mental and social problems.

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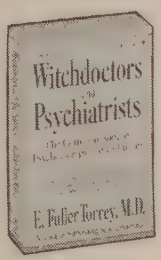
The therapist-client relationship is also in part determined by the fees paid by client to therapist. In most cultures there is thought to be a relationship between how much the therapy costs and how much it is worth. The cost of individual Western therapy can go over one hundred dollars a fifty-minute hour in large cities. Such an extraordinary fee is not exclusive to Western therapists. In Martinique, a therapy session may cost the equivalent of one week's wages; however, the therapy is often supposed to be completed in one or two sessions. In areas where both Western and non-Western therapy are available, the latter may be the more expensive. For instance, at a hospital I visited in Singapore, the traditional Chinese therapy was more expensive than the Western. In contrast to cultures where a high fee characterizes the therapist-client relationship, there are others in which the only fee is a donation. The client leaves whatever he can afford. Even in such cultures, however, the therapist is well off. In all cultures of the world, witchdoctors and psychiatrists are among the wealthier members of the society.



Witchdoctors and Psychiatrists
(The Common Roots of Psychotherapy and Its Future)
E. Fuller Torrey, M.D.
1972; 316 pp.
$8.95
($10.45 postpaid) from:
Harper & Row
2350 Virginia Avenue
Hagerstown, MD 21740
800/638-3030
or Whole Earth Access

Home Exchanging

Home exchanging can be a great idea for traveling if you don't want to be a tourist. You trade residences on an even-swap basis, getting to live in a home belonging to someone who, at the same time, gets to live in your house. If you're looking for something different than staying in expensive hotels that brand you as a "tourist" and tend to separate you from the majority of people who live in another state or country, or perhaps for an economically feasible way to make an extended stay away from home, this book is a good place to start your research. Lots of details on all variations of house swapping, from straight exchanges between two parties, to multiple exchanges involving more than two residences, to simple hospitality exchanges in which a person or group stays with a family and agrees to put them up at their home at a later date. Plenty of nuts-and-bolts details on how to arrange swaps, as well as advice from experienced house-swappers for easing any anxiety you might have about staying in a stranger's home and vice versa, all aimed at maximizing your potential to arrange a mutually beneficial house swap.

This is the only sourcebook I've seen with this information.
—Steve Cohen

Home Exchanging
James Dearing
1986; 192 pp.
$9.95
($11.45 postpaid) from:
Globe Pequot Press
Box Q
Chester, CT 06412
800/243-0495
or Whole Earth Access

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John and Linda, avid scuba divers for many years, have long dreamt of exploring Australia's Great Barrier Reef, but the air fare, coupled with rooms, food, scuba and boat fees were always enough to scare them away. After contacting a family in Townsville, Queensland, however, their dream suddenly looked plausible. The Aussies had always wanted to visit the U.S., and not only were they willing to exchange their house and car, they also had a fishing boat. By using the craft as a dive boat "we saved a fortune," says John. "Those commercial boats charge over $100 a day per diver." Their total expenditure was $2,400 for three months of diving, with plane tickets and all expenses included.

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Home exchanging is not a spur of the moment travel idea for the unprepared. Experienced swappers can arrange a deal quickly, but only because they've learned how to provide for their exchange partners. And even then it takes time.

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As a rule, standard homeowner's insurance policies will insure your partners in your home since they are your guests and are staying for free.

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I've had exchangers comment that their pets seemed healthy and at ease after being left at their normal home under the charge of exchange guests, whereas the pets are emotional wrecks if they are left in unfamiliar surroundings with friends or relatives. Especially if your partners are bringing children, they probably won't mind caring for your pets. . . .

Don't hesitate to suggest that care for something of your partner's (the dog, cat, and chickens) be traded for duties at your home (watering the indoor plants, gardens, and lawns). That's a good way to save money.

Health Information for International Travel

This is the bible used by health professionals to determine what diseases one is at risk of contacting in a given country, and what measures are indicated to prevent getting them. There is extensive information on immunizations, with both country requirements and CDC recommendations on everything from cholera to yellow fever. Other topic areas include use of gamma globulin for hepatitis protection, appropriate malaria prophylaxis, prevention and recommended treatment of traveler's diarrhea, and techniques for water purification. Since the book is indexed both by disease and country, specific information is easily found.

From the "Health Hints for the Traveler" section: "The major causes of serious disability or loss of life are not infectious. Trauma caused by accidents, particularly automobile accidents, leads the list. . . . Some diseases may not manifest themselves immediately. If travelers become ill after they return home, they should tell their physician where they have traveled. Most persons who acquire viral, bacterial, or parasitic infections abroad become ill within 6 weeks after returning from international travel."

The manual is revised yearly. *—Victor LaCerva, M.D.*

Health Information for International Travel
1987; 160 pp.
$4.75
postpaid from:
Superintendent
of Documents
U.S. Government
Printing Office
Washington, DC 20402
202/783-3238
or Whole Earth Access

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The estimated risk of acquiring malaria varies markedly from area to area. . . . For example, during 1982-1985, 549 cases of *P. falciparum* among American civilians were reported to the CDC. Of these, 414 (75%) were acquired in sub-Saharan Africa, 17 (3%) were acquired in Southeast Asia, and 10 (2%) were acquired in South America. Of the 22 fatal infections, 17 were acquired in sub-Saharan Africa. Thus, the preponderance of imported malaria among American travelers was acquired in sub-Saharan Africa, despite the fact that only an estimated 90,000 Americans travel to sub-Saharan Africa each year, versus an estimated 900,000 American travelers to Southeast Asia and South America each year. This disparity in the risk of acquiring malaria can probably be explained by the fact that travelers to Africa are at risk in both rural and urban areas, and moreover, tend to spend considerable amounts of time, including evening and nighttime hours, in rural areas where risk is highest, e.g. game parks and other rural tourist sites. . . .

All travelers to malarious areas of the world are advised to use an appropriate drug regimen and personal protection measures to prevent malaria. However, travelers must be informed that, regardless of methods employed, it is still possible to contract malaria. Malaria symptoms can develop as early as 8 days after initial exposure in a malaria-endemic area and can appear months after departure from a malarious area, even after chemoprophylaxis is discontinued. It is important for travelers to understand that malaria can be effectively treated early in the course of the disease but that delaying appropriate therapy can have serious or even fatal consequences.

University Research Expeditions Program

This program is an interesting conjunction of personal adventure with academic research in which volunteers work with a university project, generally overseas. Each project is directed by a university scholar with the volunteers making up the field team. Members contribute toward the project's costs and, due to the curious nature of our tax structure, are able to deduct it from their taxes.

Research in animal behavior, archaeology, anthropology, botany, earth sciences and marine studies are on this year's schedule, and the sites range from Patagonia and Nepal to Peru and Fiji. Deducting a trip to Fiji sounds like a nice idea to me. —*Dick Fugett*

Catalog **free** from University Research Expeditions Program, University of California, Berkeley, CA 94720; 415/642-6586.

Top shells—the primary source for Mother of Pearl. (R. Ford)

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Moon over Moorea Moorea, French Polynesia

Conditions: Participants will share accommodations in a small cottage on the island of Moorea, across the channel from Tahiti in French Polynesia. The weather is tropical; warm days and mild nights favor the growth of pineapple which is abundant on the island. All snorkeling will be conducted along the inner reef in shallow water.

Helpful Skills or Interests: Background or interest in biology, ecology, or marine studies helpful. Participants must be strong swimmers with snorkeling experience. Laboratory skills most welcome.

Assembly Point: Moorea *Contribution:* $1285

The Chair

This must be the champion minimalist chair, yet it supports nicely, matching its flexible contours to yours. It's padded in the right places too. I'm not sure what I expected upon inserting my nether parts into The Chair for the first time, but I wasn't prepared to be comfortable. Surprise! It is. Hi-tech too; EVA foam, carbon-fiber stays, fancy buckles for adjustment. 1 lb 4 oz. Folds flat. Comes in colors. (Stuffsack optional.) Better than you'd think. —*J. Baldwin*

The Chair
$38
postpaid from:

Crazy Creek Products, Inc.
Box 896
Red Lodge, MT 59068
406/446-3446

Pyromid Portable Grill/Stove

Call it yupware if you will, but this thing solves a problem that has vexed lots of folks, including vegetarians: how to neatly transport an outdoor cooker. The usual devices are too big and messy for easy compatibility with cars or boats. In contrast, Pyromid folds its all-stainless steel carcass into a thin carrying case with nary a trace of grease, soot or ashes to be seen. While at work its base stays cool as the modest diet of charcoal or twigs is consumed. Nicely made. Works fine. —*J. Baldwin*

Pyromid Portable Grill/Stove
$49.95 from:
Pyromid, Inc.
3292 South Highway 97
Redmond, OR 97756
800/634-4288

Air & Space
George C. Larson, Editor
$18/year
(6 issues) from:
Smithsonian Institution
900 Jefferson Drive
Washington, D.C. 20560

Air & Space

Aviation magazines have a narrow audience — pilots, and people who'd like to be pilots. Thus they stick to a predictable format of flight tests, electronic gadgets, and news of whatever the FAA has done recently to bedevil flyers. Stories in which flying *is the principle content also appear, but sometimes they seem like an afterthought.*

The mags stay in business so the formula must work, but buried in all the technical data is the real reason for a readership — the joy and wonder of flight. Beyond all the performance specs is an experience, *and now a magazine has come along to emphasize it, while bypassing the technical stuff.*

Air & Space *is put out by the Smithsonian Institution. The formidable success of their Air & Space Museum in Washington, D.C., emphasized the public's interest in flight, and so the magazine, like the museum, takes a wide lens to look at the romance of flight and the sciences behind it. The format is high-budget slick, bolstered by healthy ad revenue. As for style, think of a* ***National Geographic*** *of the air, all-inclusive while simultaneously avoiding controversy. Publication began in April 1986.*

Coverage runs from biplanes and zeppelins to F-16s and the space shuttle. The writing is first-class, and although the contents favor high tech more than I need, I found it hard to lay down a copy. There must be many others like me, for their circulation has already reached 300,000.
—Dick Fugett

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From the basement of a white clapboard house in Salina, Kansas, the call goes out: "W-Zero-C-Y, W-Zero-C-Y." Jim McKim is talking to satellites again. As usual, the satellites are talking back.

Big deal, you say, in an age when satellites regularly transmit Elvis Presley movies around the world. But McKim is searching the heavens for OSCAR 10, a satellite designed, built, and operated not by behemoths of the aerospace industry but by amateurs, whose qualifications are a love of satellite communications technology and pooled technical savvy. For 25 years this December, radio amateurs like McKim have been running a homegrown space program, at almost no cost and with remarkable success.

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Personal service unheard of elsewhere is the norm here. Islanders could once call the airline with a grocery order, which would be filled and flown in for a 25-cent fee. Shopping service was discontinued in the 1960s, but the dependency remains. "Everyone's refrigerator has a list on the door because you can't just turn the plane around if you forget something," says South Bass resident John Blatt, who flies to his mainland job daily, frequently carrying the family's dry cleaning in garbage bags. Like most island residents, he keeps a car parked at Port Clinton airport each winter for $15.

One recent winter morning three high schoolers sat in the unheated cabin of the Otter as it snarled over Lake Erie at 1,500 feet. In the aisle sat cartons of eggs destined for an island general store, and large canvas bags of freshly caught walleyes filled the rear cargo bins. Shouting over the engine noise, the students crammed for an English literature test.

"People don't believe me when I tell them how I get to school," says Arlene Wolf, who has never ridden in a school bus. "It's hard to convince them I fly to my classes." The students fly from Middle Bass to Put-in-Bay airport on South Bass, where the island's only taxi transports them to school. Ohio taxpayers finance these arrangements as part of the state's educational obligation.

River Rescue

Whitewater boating is a sport where recent technical advances have outstripped safety. Stronger, lighter materials have allowed people in kayaks and inflatable rafts onto more rivers and into tighter jams than was ever possible when the sport was limited to canoeing. To be effective, the response to mishaps in fast-moving water must be immediate and coordinated. The authors of this excellent book were motivated to write it after witnessing the drowning of a fellow boatman in 1979.

The crux of the educational problem with this sport is that it is virtually impossible to appreciate rationally *the power of moving water. First-person lessons in fluid dynamics produce some of the steepest learning curves known to man, provided they are survived. This book is authoritative and easy to use. It moves from rules and definitions to rescue techniques adapted from mountaineering, with carabiners, ropes and belay points. The photographs are adequate and the diagrams are good. Essential reading for anyone on, or in, the water, but the authors are quick to point out that their book is no substitute for personal experience.* *—Richard Nilsen*

The pre-packaged flip line is a new development in rafting self-rescue. It stows neatly out of the way, but after a flip it can be pulled out and used to right the raft as shown.

Getting To The Ice Sculptures Of Manchuria

BY DOUGLAS YATES *(SEE BACK COVER)*

I had not pre-arranged a visa to enter China so I took a JAL flight from Alaska (my home) to Tokyo, then to Hong Kong. In Hong Kong it is a simple process to buy a 30-day visa for about $10.

It is possible, with a bit of comparison shopping, to find a travel agency that will sell you a ticket as I've described for about $650 round trip. I bought mine through All Asia Travel in the San Francisco Bay area.

While in HK I stayed at the YMCA on the Kowloon side. After a couple of days I flew to Shanghai on Cathay Pacific, the HK-based airline. I knew no one in Shanghai but on arrival had a serendipitous encounter with an English-speaking Chinese man.

He had just purchased a new motorcycle and was unsure how to operate it smoothly. In exchange for driving lessons and safety lectures (I have rolled up over 100,000 miles on two-wheelers over the years) he played tour guide and interpreter.

For a week I saw Shanghai, a city of 12 million, from the back of his motorcycle. We visited small back-alley religious shrines and the huge glass-and-mirror international hotels before he deposited me at the train station.

My arrival in Harbin was planned to coincide with the opening of the first International Ice Sculpture Contest. Ice carving was originally limited to small, delicate lanterns illuminated by candles and placed outside homes to welcome the Chinese New Year.

Today it has grown far beyond its simple beginnings. Italy, Denmark, Sweden, Canada and Japan have sent teams to compete. Harbin ice carvers have gone to Europe and Wisconsin to demonstrate their skills.

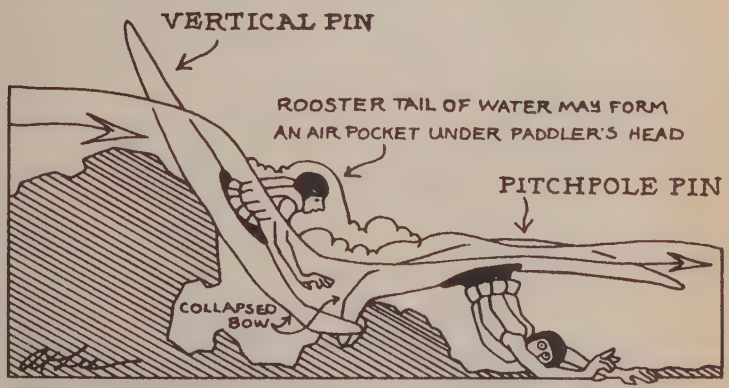
The nearby Songhua River provides clear ice in unlimited supply. Because the river is swift-flowing, ice quarried from its surface is almost flawless. It reminds me of giant slabs of quartz crystal.

Over the years a variety of electric saws and grinders have been designed to shape and plane the ungainly blocks of ice. Once the structures are erect, the finishing touches are applied by hand with modified tools originally designed for wood and metal. ■

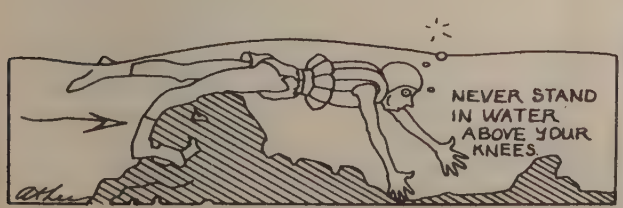
Douglas Yates

•

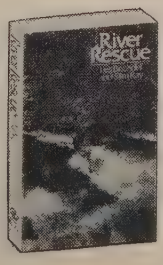
When the bow is wedged into rocks or under a submerged tree, the force of the water will quickly produce catastrophic results: the boat may "pitchpole" and collapse at the fulcrum created by the obstacle, but a more common result is for the water to force the stern of the boat to the bottom too, collapsing it along with the buried bow. Even if the boat does not actually fold, the paddler may be held inside the boat by the sheer force of the current against his back. If the water is not too deep he may be able to form an air pocket in front of his body by pushing up on the front deck. This is very tiring, especially in cold water, and rescue efforts must begin immediately.



Vertical and pitchpole pins.



Entrapment.



River Rescue
Les Bechdel and Slim Ray
1985; 227 pp.
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Dr. Seuss:

ARCHITECT OF SOCIAL CHANGE

BY TIM JOHNSON

AS A CHILD GROWING UP in a "Christian," white community in the Deep South in the 1950s and 60s, I had many questions about the segregationist teachings of my elders. They *all* said that white people and black people should be separated.

Some of the children voiced disagreement, but their parents were Yankees anyway, and they talked sort of funny and weren't much to be listened to. And the grown-ups I was around knew so much that I figured they were probably right when they told me I would understand when I got older.

I remember segregation as a regular topic of Bible study at the segregated YMCA I attended, as well as at school and elsewhere; schools in some places had been integrated; they might be integrated in Georgia soon. The more crass children would sometimes talk about "niggers," but they were always corrected by the Bible class leaders — "colored people" was the appropriate term, since that other word was offensive to colored people. But the sons of Yankees who suggested that colored boys should be allowed to join the YMCA — that was simply unchristian!

> Those stars weren't so big. They were really so small
> You might think such a thing wouldn't matter at all.

Now, I'm not talking about Klan types here — my parents and teachers universally abhorred the Klan and its violence. They were very specific in saying that white people were not better than black people, just different.

"If God made us so distinctively different, He must have a reason," explained the leader of a Y Bible-study class. "Just as crows and swans didn't live and work together, neither should black and white people."

> When the Star-Belly children went out to play ball,
> Could a Plain-Belly get in the game . . . ? Not at all.
> You only could play if your bellies had stars
> And the Plain-Belly children had none upon thars.

"What about hair and eye color?" I asked the Y leader, a sincere question, not a sarcastic one. "Did God give some people brown hair, others blonde because He wanted us to know we should be separate?"

"No, no, no," he exclaimed with a somewhat confused but amused expression. "That's different. You'll understand when you get older."

Not completely satisfied, I accepted what he and the other grown-ups said. After all, white and black people were segregated, not only in my hometown, but on television and just about everywhere I saw except professional sports. And grown-ups knew about such things. I was a small child and was still learning, from grown-ups and from books.

When the Star-Belly Sneetches had frankfurter roasts
Or picnics or parties or marshmallow toasts,
They never invited the Plain-Belly Sneetches.
They left them out cold, in the dark of the beaches.
They kept them away. Never let them come near.
And that's how they treated them year after year.

My favorite writer was Dr. Seuss. He had written *Green Eggs and Ham* and *The Cat in the Hat*. (My mother occasionally added a bit of green food coloring to my scrambled eggs so I could eat green eggs and ham.) I loved reading, and my elders encouraged it: great learning comes from books, they said, you will learn a lot from them. So supportive of reading were my parents that, while they normally would only buy things for my five siblings or me at birthdays and Christmas, they would buy any book we wanted if we promised to read it.

Then, one day, someone gave me a new book: *The Sneetches and Other Stories*. I was thrilled — it was by Dr. Seuss! This book, particularly its title story, would have a profound and lasting impact on my life.

The Sneetches, segregated according to whether or not they had stars on their bellies, bore a remarkable resemblance to my own community. The ones with stars were like white people where I lived, the ones without stars were like black people. Young though I was, I realized that "separate but equal" was far from equal — the black children (and grown-ups) clearly had less than the whites with whom I interacted.

But the Plain-Belly Sneetches were offered a way out of their predicament. A fellow with the Seussian name Sylvester McMonkey McBean arrived with a machine which, for three dollars, would add a star to your belly! The Plain-Belly Sneetches paid McBean the money and soon they had "stars upon thars!"

Then they yelled at the ones who had stars at the start,
"We're exactly like you! You can't tell us apart.
We're all just the same, now, you snooty old smarties!
And now we can go to your frankfurter parties!

"Good grief!" groaned the ones who had stars at the first.
"We're *still* the best Sneetches and they are the worst.
But, now, how in the world will we know, they all frowned,
"If which kind is what, or the other way round?"

This was fascinating. We knew we were better because we had stars. We're still better, but how can we tell? Hmmm . . .

McBean was not in this for societal good. He had *another* machine which would *remove* the stars — for ten dollars each. The original Star-Belly Sneetches, anxious to maintain their superiority, paid up without hesitation.

Then, with snoots in the air, they paraded about
And they opened their beaks and they let out a shout,
"We know who is who! Now there isn't a doubt.
The best kind of Sneetches are Sneetches without!"

Then, of course, those with stars all got frightfully mad.
To be wearing a star now was frightfully bad.
Then, of course, old Sylvester McMonkey McBean
Invited *them* into his Star-Off Machine.

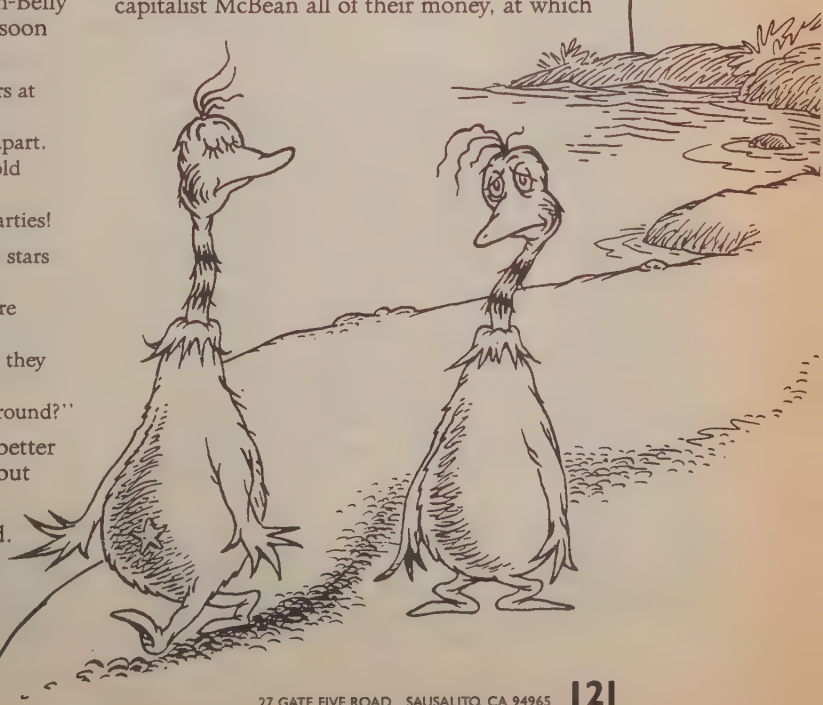
Then, of course from THEN on, as you probably guess,
Things really got into a horrible mess.

Sneetches were dashing into one machine or the other as quickly as they could pile up the money next to McBean. It lasted all day long.

They kept paying money. They kept running through
Until neither the Plain nor the Star-Bellies knew
Whether this one was that one . . . or that one was this one
Or which one was which one . . . or what one was who.

I did not know the word "analogy." I did not even understand that Theodor Seuss Geisel (a.k.a. Dr. Seuss) probably meant for me to identify with the Sneetches. But I *did* wonder what would happen if all the people in my community changed colors around and around and around. And I understood that Dr. Seuss was saying that you should not judge people by so trivial a thing as whether they had stars upon thars — or black skin or white. And it was in a book!

The Sneetches eventually gave the enterprising capitalist McBean all of their money, at which

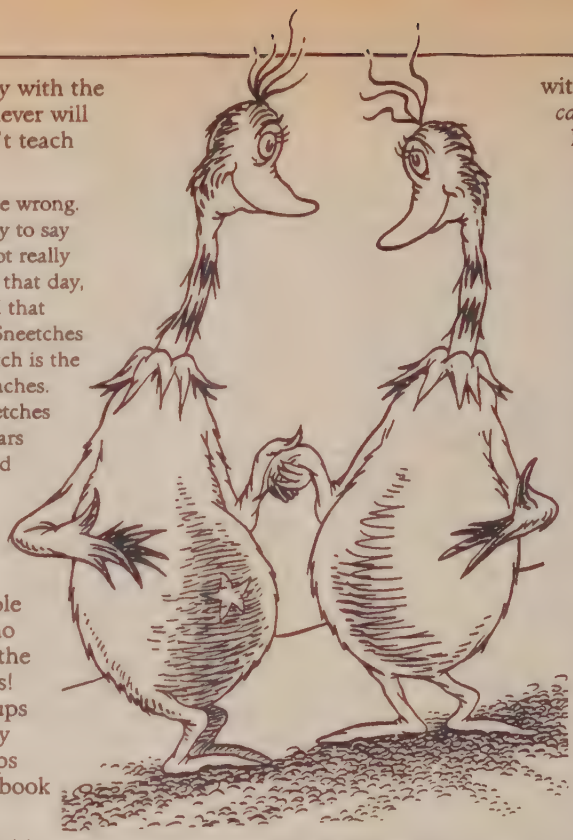


point he drove away with the comment, "They never will learn./No. You can't teach a Sneetch."

But McBean was quite wrong.
I'm quite happy to say
That the Sneetches got really
quite smart on that day,
The day they decided that
Sneetches are Sneetches
And no kind of Sneetch is the
best on the beaches.
That day, all the Sneetches
forgot about stars
And whether they had
one, or not,
upon thars.

If Sneetches are Sneetches, I thought, then people are people — and no kind of people are the best on the beaches! Maybe the grown-ups were wrong. Clearly either the grown-ups were wrong or the book was wrong.

I realized that I would have to decide which was right, that the grown-ups might be wrong, that I might understand something better than they.



Illustrations from *The Sneetches and Other Stories* by Dr. Seuss ($9.95 from Random House/ Order Dept., 400 Hahn Road, Westminster, MD 21157).

The Sneetches was published in 1961. In the civil rights movement, it hardly ranks on a par with *Brown v. Board of Education* or the Selma march. But in my life, that book hastened my conversion from a child of segregation to a civil rights advocate who believes that the removal of legal segregation is the best thing to happen to white people in the American South in my lifetime.

As I look over some of Dr. Seuss's other books, I expect that they have the same kinds of impacts on other children: *The Lorax*, which calls for protection of the environment and personal responsibility for it; *The Butter Battle Book*, which examines the arms race between two cultures which dispute which side of your bread you should put the butter on and concludes with both sides threatening the existence of the planet while the child wonders why.

Dr. Seuss — architect of social change. Perhaps if all our politicians were required to read his collected works prior to taking office . . . ■

Granta

Inevitably, this magazine invites comparison to ***Whole Earth Review****: it's perfect-bound, over 250 pages, meant for permanent keeping on a bookshelf, and it covers no editorial theme except the publication of quality work. But the atmosphere is different: somewhat more literary, much less graphic, quite a bit more European (it's published in England). It reminds me of the high-quality literary magazines that rose and died during the early '60s. As anyone who ever tried to promote* ***WER*** *(and probably* ***Granta****) can tell you, it's hard to describe a magazine without an editorial theme — all I say when I recommend this magazine to friends (which I do, often) is that the contributors vary widely, and their pieces (fiction or non-) are often extremely personal, but the magazine has a voice as consistently pure as a deep-channeled stream. I turn to* ***WER*** *to find out what's going on; I turn to* ***Granta*** *to be inspired or taken somewhere else for a little while.* —*Art Kleiner*

•

In Borneo, when staying in the longhouses, I learned that going down to the river in the early morning is the polite thing to do — you know you are swimming in the socially correct patch of muddy river when fish nuzzle your pants, wanting you to take them down and produce their breakfast. In the Amazons, on the other hand, should you have too much to drink and inadvertently urinate as you swim, any homeless candiru, attracted by the smell, will take you for a big fish and swim excitedly up your stream of uric acid, enter your urethra like a worm into its burrow and, raising its gill-cover, stick out a set of retrorse spines. Nothing can be done. The pain, apparently, is spectacular. You must get to a hospital before your bladder bursts; you must ask a surgeon to cut off your penis.

Then, in consultation with my friend at the Radcliffe Infirmary in Oxford, Donald Hopkins, the inventor of the haemorrhoid gun, I designed an anti-candiru device: we took a cricket-box, cut out the front panel and replaced it with a tea-strainer. —Redmond O'Hanlon, "Amazon Adventure," *Granta* 20

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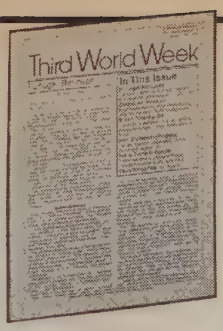
—John Benecki



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Bolivia: Pagan Festival by Kim MacQuarrie
[Mr. MacQuarrie is a freelance writer based in Peru.]

POTOSI, Bolivia — In this mining city 13,000 feet above sea level, the middle of February brings the festival of Tatactachu, the miner-god. It is based on the proposition that, as one miner puts it, ''outside, all miners are Catholics. Inside, all of them worship the devil.''

Disguised as devils, or as the pre-Columbian Incas, or as black slaves like those imported in the 16th century by the Spanish conquistadors, miners gather at the mouths of mines and dance down Cerro Rico (Rich Hill) to Potosi.

As they dance they throw sticks of dynamite that explode thunderously in the air. People come from all over Bolivia to watch.

Then the miners prepare a bountiful meal, baking llama meat and potatoes in huge adobe ovens, and feast to the accompaniment of alcohol, coca and music. It is the greatest of many pagan celebrations in Bolivia that predate the 1538 Spanish Conquest.

The festival points up a profound belief of the miners, who are mostly Quechua-speaking highland Indians: it is the devil who in fact is the mine's rightful owner.

Deep in each mine, the miners have built shrines to the devil, where they worship him on Friday nights. It is he, they say, who gives them the silver and tin. It is he who possesses the mine's soul.

•

Nepal's Entrepreneurs by Bijay Lal Shrestha
[Mr. Shrestha is Chief Editor of the English News bulletin for the Nepal Television Network in Kathmandu.]

KATHMANDU, Nepal — Here in the capital of Nepal, Govinda Ghimere, a 21-year-old invalid with a useless right hand, earns his living with the help of an old bathroom scale.

Every morning, Ghimere sits with other bathroom-scale proprietors on the ground along a footpath inside the Sundhara bazaar in downtown Kathmandu. Sundhara is a busy flea market with rows of vendors and four-wheeled carts where delicacies are cooked before your very eyes.

A French tourist with a large carton steps on Dari's scale, writes down the weight and gets off. He puts down the carton, weighs himself again. He hands the boy a 50-paisa coin, and walks off toward the nearby post office. The tourist now has a good idea of how much the carton he is mailing to France will weigh.

A scale imported from nearby India costs about 550 Nepalese rupees (U.S. $24). Used scales are available at half that price.

A scale keeper can earn about 20-25 rupees a day. That comes to U.S. $27-34 a month, or an average annual income of about U.S. $366 — much higher than that of most Nepalese, which averages only about U.S. $140.

Readers International

*Sherman Carroll was working in the world headquarters of Amnesty International in London and Dorothy Connell was on the staff of the magazine **Index on Censorship**. They knew firsthand that there were many extraordinary writers out there who couldn't get published in their own countries. Knowing that they couldn't help get these books published in their writers' home countries, Carroll and Connell decided to publish them instead for the English-speaking world.*

*Thus was born **Reader's International**, a unique enterprise which is half publisher and half book club. **RI** publishes six books a year in hardbound editions on a subscription basis for its members. They also make most of their titles available to bookstores in paperback editions. In its first three years **RI** has published works for their first time in English from Latin America and the Caribbean, the Middle East, Asia, Africa and Eastern Europe.*

*Though **RI** features writers who have suffered political censorship, this is only occasionally the direct subject of their works. **RI**'s titles bear the ponderous (and unfortunate) label of being ''important'' books because of the censorship of their authors, but I have found them to be of very high literary quality (as has the **New York Times**, which at my last check had reviewed nearly all of **RI**'s titles). I greatly look forward to each new book's arrival.*

—Keith Jordan

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EROTIC SPIRITUALITY:
Surrendering to the Eastern Lyric

by Katy Butler

MOST CONTEMPORARY American poetry and fiction doesn't move me. It's too self-consciously minimalist — more and more beautifully written about less and less — a symptom, I think, of our culture's spiritual fracturing. I draw sustenance instead from these jewel-books, which I keep by the side of my bed: the ecstatic religious and erotic poems of an 18th-century Zen Buddhist hermit, two medieval Japanese court women, a Moslem from 15th-century India, and an 11th-century Turkish Sufi.

All have been translated into simple, transparent English by excellent contemporary poets, who have kept the souls of the poems alive through a passage of many years and miles. These poems go straight to my heart, like whispers from a lover in the night. Their surface subjects vary: the frosty sleeve of a hermit's robe, a court lady's secret affairs, a drunken night, the call of an internal flute. But they all unite sensuality with yearnings for, and experiences of, spiritual surrender.

One Robe, One Bowl

(The Zen Poetry of Ryokan). John Stevens, trans. 1977; 85 pp. **$5.95** ($6.95 postpaid) from Charles E. Tuttle Co., Inc., P. O. Box 410, Rutland, VT 05701; 802/773-8930.*

When a robber stole Ryokan's quilt and meditation cushion from his mountain hut, the Japanese monk wrote: "The thief left it behind — the moon at the window." Ryokan lived high on Mount Kugami in the late 18th and early 19th centuries, descending to drink sake with farmers, to play games with their children, and to beg rice to stay alive. In his sixties, he fell in love with a Buddhist nun, Teishin, who published a collection of his poems after his death ten years later in 1831.

~

ALWAYS, when I was a boy,
I would play here and there.
I used to put on my favorite vest
And ride a chestnut horse with a white nose.
Today I spent the morning in town
And the evening drinking amid the peach blossoms
by the river.
Returning home, I have lost my way. Where am I?
Laughing, I find myself next to the brothel.

~

O, THAT my priest's robe were wide enough
to gather up all the suffering people
In this floating world.

~

FROM TODAY the nights turn colder—
I sew my tattered robe,
The autumn insects cry.

The Ink Dark Moon

(Love Poems by Ono No Komachi and Izumi Shikibu, Women of the Ancient Court of Japan). Jane Hirschfield with Mariko Aratani, trans. 1988; 116 pp. **$14.95** postpaid from Charles Scribner's Sons/Macmillan Order Dept., Front and Brown Streets, Riverside, NJ 08075; 800/257-8247.*

*Ono No Komachi and Izumi Shikibu were ladies-in-waiting in Japan's Heian Court (c. 800-1200), which also produced the women authors of **The Pillow Book** and **The Tale of Genji**. Their poems are soaked with the eroticism and self-consciousness of court society, but transcend its mannerisms with their awareness of life's quick passage. Many of their poems — written in the five-line waka form, a precursor of haiku — are replies to letters of assignation from princely lovers.*

When my desire
grows too fierce
I wear my bedclothes
inside out,
dark as the night's rough husk.

•

It seems a time has arrived
when you've become like those horses
wild with spring
who long for distant fields
where the light mists rise.

—Ono No Komachi

Perhaps, if I make a friend
of the mountain cuckoo
in this world,
he will talk with me
when we cross the mountain of death.

•

In this world
love has no color—
yet how deeply
my body
is stained by yours.

—Izumi Shikibu

Unseen Rain

(Quatrains of Rumi). John Moyne and Coleman Barks, trans. 1986; 83 pp. **$8** ($9 postpaid) from Threshold Books, RD3/Box 1350, Putney, VT 05346; 802/254-8300.*

Jelaluddin Rumi was a conventional Islamic religious scholar in 13th-century Turkey until, at the age of 37, he met a wandering dervish — a Sufi — named Shams of Tabriz. According to legend, Shams took all of Rumi's intellectual books and threw them into a well, and the two entered weeklong periods of mystical conversations and merging. Shams was eventually murdered by Rumi's jealous students; afterwards came these amazing poems, which draw on Islamic, Christian, and Jewish religious traditions.

This night there are no limits to what may be given.
This is not a night but a marriage,
a couple whispering in bed in unison the same words.
Darkness simply lets down a curtain for that.

•

The center clears. Knowing comes:
The body is not singular like a corpse,
but singular like a salt grain
still in the side of the mountain.

•

The light you give off
did not come from a pelvis.
Your features did not begin in semen.
Don't try to hide inside anger
radiance that cannot be hidden.

Open Secret

(Versions of Rumi). John Moyne and Coleman Barks, trans. 1984; 82 pp. **$7** ($8 postpaid) from Threshold Books, RD3/Box 1350, Putney, VT 05346; 802/254-8300.*

This collection includes longer poems as well as quatrains:

Today, like every other day, we wake up empty
and frightened. Don't open the door to the study
and begin reading. Take down the dulcimer.

Let the beauty we love be what we do.
There are hundreds of ways to kneel and kiss the ground.

►

*** Or Whole Earth Access.**

RUMI: We Are Three

Coleman Barks, trans. 1987; 87 pp. **$8.50** postpaid from Coleman Barks, 196 Westview Drive, Athens, GA 30606; 404/543-2148.*

I used to want buyers for my words.
Now I wish someone would buy me away from words.

I've made a lot of charmingly profound images,
scenes with Abraham, and Abraham's father, Azar,
who was also famous for icons.

I'm so tired of what I've been doing.

Then one image without form came,
and I quit.

Look for someone else to tend the shop.
I'm out of the image-making business.

Finally I know the freedom
of madness.

A random image arrives. I scream,
"Get out!" It disintegrates.

Only love.
Only the holder the flag fits into,
and wind. No flag.

The Kabir Book

Kabir was the son of a Moslem weaver in Benares, India. He wrote in the 15th century, influenced by Sufism and the bhakti (devotional) path of Hinduism. His work reminds me of the Christian tradition of "bridal mysticism" in which union with God is described in sexual metaphors. Robert Bly transmogrified these versions out of earlier translations by Rabindranath Tagore. Bly has used contemporary images (i.e. "loaded gun" instead of "weapon") in some places. I have no idea how close others are to Kabir's original Hindi, and neither does Bly. But as poems, they stand on their own.

(Forty-Four of the Ecstatic Poems of Kabir). Versions by Robert Bly. 1977; 71 pp. **$6.95** ($8.95 postpaid) from Beacon Press, 25 Beacon Street, Boston, MA 02108; 800/638-3030.*

I know the sound of the ecstatic flute,
but I don't know whose flute it is.

A lamp burns and has neither wick nor oil.

A lily pad blossoms and is not attached to the bottom!

When one flower opens, ordinarily dozens open.

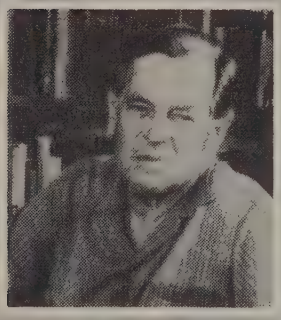
The moon bird's head is filled with nothing but
thoughts of the moon,
and when the next rain will come is all that the rain
bird thinks of.

Who is it we spend our entire life loving? ■

* Or Whole Earth Access.

A Primer on Joseph Campbell and the Mythological Dimensions of Consciousness

BY JOHN LOBELL



Joseph Campbell 1904-1987

The means whereby to identify dead forms is Mathematical Law. The means whereby to understand living forms is Analogy. —Oswald Spengler, *The Decline of the West*

FROM THE EARLY 1970s UNTIL HIS DEATH IN 1987, Joseph Campbell lectured to thousands, weaving together East and West, the ancient past and the present, mythology, art, religion, history, and literature. His presentations, usually two days long, were always illustrated by powerful slide images, and the subjects included Arthurian Romances; Hinduism, Buddhism, and Taoism; The Goddess; Dante, Picasso, and Joyce; Death and Transformation. A master storyteller as well as a scholar, Campbell always brought his subject to life and made it relevant to the lives of those in his audiences.

We ask many questions, but if we keep pushing them back, we ultimately get to: "Who are we and what are we doing here?" In the past, religion addressed this question through the direct symbolic power of the image: the shamanic power animal, the Buddhist wheel of life, the Hindu mandala, the Christian crucifix. More recently, however, religion has turned from the image to theology and moral proscriptions. In our culture, religion has lost much of its power and has been replaced by the social sciences and the arts and humanities, both of which seek to understand human nature, but by different methods.

The social sciences (psychology, sociology, political science, economics) attempt to emulate the natural sciences (physics, chemistry, biology) and look for timeless laws and cause-and-effect rela-

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Joseph Campbell was one of this century's great dream-weavers and storytellers. His explication and synthesis of myths from around the world is especially useful for anyone investigating spirituality or religion without joining a church. Author John Lobell is a longtime Whole Earth Review *reader, and is Professor at the Pratt Institute's School of Architecture in Brooklyn, New York.* —*Richard Nilsen*

tionships. Perhaps these methods are not appropriate for dealing with human nature, and many question the success of the social sciences.

In contrast, the arts and humanities (painting, sculpture, music, literature, philosophy, cultural history) build on history and the observations of past cultures. For example, in order to understand Picasso and his explorations of the human being, we must be aware of Cézanne, Leonardo, Greek art, African art. This form of knowledge roots itself in the past and in human culture rather than attempting to build a body of knowledge independent of time. The study of myths, as pursued by Joseph Campbell, similarly roots itself in the past and, as a result, is perhaps better able than the social sciences to tell us about the meanings of our lives.

Buddhist temple conceived in the image of the world mountain. Borobudur, Java, 8th-9th Century A.D.

Two Generators of Western Thought: Descartes and Vico

The social sciences grew out of a branch of Western thought which developed during the Renaissance and which received its formal philosophical footings in the work of Rene Descartes (1596-1650). Descartes attempted to extend mathematical methods to all fields of human knowledge, thereby rationalizing experience and trivializing history and culture.

Giambattista Vico (1668-1744) rejected Descartes' rationalism and with it the notion of one fixed human nature. For Vico, history was central, with each period having its own patterns of meaning, discernible through the study of its language and myths.

The views of these two generators of Western thought, Descartes and Vico, are still in conflict today. Descartes dominates, but there is a surge in Vico's approach as we begin to realize the inability of the social sciences to tell us anything about the meanings underlying our individual and collective lives.

Following in Vico's tradition, Oswald Spengler (1880-1936) illuminates meaning in history, and Carl Jung (1875-1961) illuminates it in the psyche. In mythology, it is Joseph Campbell who most clearly addresses the issues of individual and collective meaning. And since Campbell sees mythology broadly, encompassing not only legends and fairy tales, but also religion, art and literature, he illuminates a large part of our lives.

Four Functions of Myth

For Campbell, there are four great functions of myth. The first is to awaken and maintain a sense of wonder of the whole mystery of the universe in our waking consciousness. The second is to provide a map or picture of the universe and of our relationship to it. The third is to validate and maintain the moral systems and life-customs of a particular culture. And the fourth function is psychological, aiding the individual in passage through life's stages, from the dependency of childhood to the responsibilities of maturity, to old age and the transition through death.

Campbell's method in mythology is the study of thousands of myths and mythological traditions, and the deduction of general principles. In so doing, he maps the realms of meaning which are the fields of potential in which our lives move.

Thus for Campbell, mythology becomes a suprapsychology, a system of principles describing the nature and workings of being, the universe, society, and individual development. Embedded in myths, fairy tales, theologies, art, and science are the accumulated wisdoms of cultures and individuals, available to us like words in a book if we know the codes for deciphering them. Cracking the codes has been Joseph Campbell's lifelong career.

Integrating the East with Modernism

Campbell studied at Columbia University, and then went to Europe in the 1920s where he discovered Freud and Jung, Picasso and Matisse, Sanskrit and the Orient, Mann and Joyce. Campbell's first book, done with Henry Morton Robinson, was *A Skeleton Key to Finnegans Wake* (1944), the standard reference still used by those attempting to read James Joyce's masterpiece.

Campbell describes Joyce as having found his way out of Catholicism without losing his symbols — a task which Campbell also accomplished for himself. Campbell feels that symbols, still rich in much of modern art, should not only be interpreted theologically, but also must be directly felt, and must become "transparent to the transcendent," that is, pointing beyond themselves to that which stands behind the phenomenal world and beyond concept.

Campbell edited the lectures of the great Indologist Heinrich Zimmer, which he published as *Philosophies of India* (1941), *Myths and Symbols in Indian Art*

and Civilization (1946), and *The Art of Indian Asia* (1955). These, and his work with Swami Nikhilananda in translating The Gospel of Sri Ramakrishna, along with his visits to India made him familiar with Indian culture and spiritual traditions. When, in the 1960s and 1970s, Americans became interested in Eastern spiritual ideas, Campbell was there to act as a guide, relating ancient traditions to our needs today.

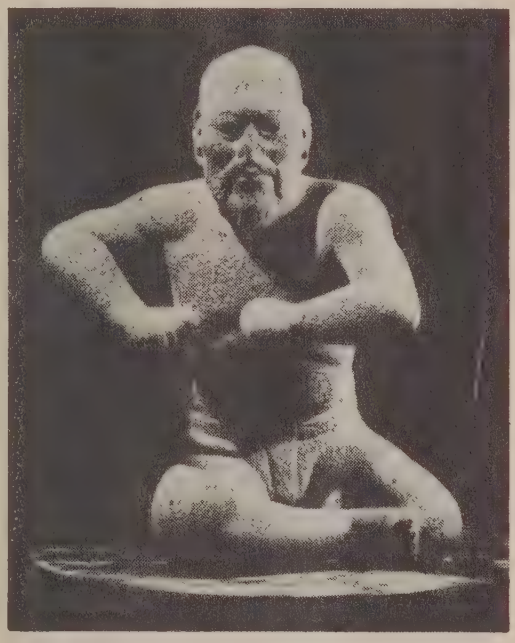
Deciphering the One Great Story

In 1949 Campbell published *The Hero With a Thousand Faces*, the book that made his reputation. What Campbell had realized (as others had done before him) was that there are two levels to myths: the universal and the local. Thus, for example, a dying and resurrecting god, born of a virgin, and associated with a cross, is a universal idea, what Jung would call an archetype. This archetype then receives varied local expression in Christ for the Christians, Adonis for the Greeks, Quetzalcoatl for the Toltecs, Osiris for the Egyptians, and in numerous other manifestations. Campbell feels that as long as we insist on the historical reality of a local deity or particular event, we miss the larger meaning, which is metaphorical, in this case of the possibility of our own death to worldly attachment and our opportunity for spiritual rebirth.

In *Hero*, Campbell's main concern is with the archetypal hero journey. In looking at myths, legends, fairy tales, novels and individual mystical experiences, he uncovers an underlying pattern in which the hero is called to the quest and goes through a series of stages. First, separation from ordinary reality. Thus Odysseus is blown off course on his trip home from Troy to the land of the lotus eaters, signaling that the rest of the adventure will be on another level of consciousness; the Princess drops her golden ball into the pond and a frog brings it back and talks to her. Next, there is entry into a realm of fabulous forces, where the hero must survive a succession of trials. Odysseus encounters the sirens and visits the land of the dead; Theseus enters the labyrinth; Aeneas enters the underworld. A decisive victory is won: Prince Charming's sword parts the thorns surrounding Sleeping Beauty's castle; Odysseus slays the suitors. Finally the hero returns to enrich the world. Prince Charming and Sleeping Beauty marry and live happily ever after; Odysseus and Penelope are reunited, bringing harmony once again to the kingdom.

This then is the monomyth, the structure of a fundamental potential in our lives. It is the story of Buddha, Christ, and Mohammed. And today we see it in *Star Wars*, in which Luke Skywalker leaves the farm (ordinary reality), journeys to a realm of space technologies (fabulous forces), destroys the death star (winning a decisive victory), and aids the just cause of the rebels (enriching the world). George Lucas readily acknowledges Campbell's influence on his films.

Campbell's analysis of the hero journey is not just scholarly research into ancient literature. It is a deciphering of a code that speaks to us today, laying out maps of the landscape of our own individual psyches, of the levels of reality and unreality we encounter, and of the possibilities of our lives. Campbell writes: "The latest incarnation of Oedipus, the continued romance of Beauty and The Beast, stands this afternoon on the corner of 42nd Street and Fifth Avenue, waiting for the traffic light to change."



Olmec "Wrestler" (Veracruz, Mexico) is representative of the earliest New World high culture complex.

A Career of Scholarship and Storytelling

From 1959 to 1968 Campbell published a four-volume work, *The Masks of God: Primitive Mythology, Oriental Mythology, Occidental Mythology* and *Creative Mythology*. Here he looks at the wellsprings of the human imagination, then the great division between East and West, and the role of Christianity and the rise of science in our world.

In 1972, age forced Campbell's retirement from Sarah Lawrence College where he had taught since the '30s. On the day of his last class he flew to Iceland for a conference on altered states of consciousness, thus beginning his relationship with the human potential movement, and a new career as a lecturer. He lectured throughout this country, but primarily in New York, where an intellectual audience appreciated his scholarship, and in California, where a New Age audience appreciated his access to other levels of consciousness.

Campbell died in October 1987 at the age of 83, while still at work on his multi-volume *Historical Atlas of World Mythology*, in which he called on all of his knowledge and insight to present the human condition as a vast geo-historical drama, with the

rise and spread of the great themes that animate human life. The first volume, *The Way of the Animal Powers,* appeared in 1983, and subsequent volumes are still under preparation.

In this, as in his other works, Campbell gave new authority to the cultures of the past, showing the earliest peoples capable of experiencing and integrating the complexities of life in ways commensurate with the sophistication of our own. And, at the same time, he deepens the meanings of our experiences, whether that of the awe of the stars at night, the mystery of the relationship of man to woman, or the image of the crucified Christ. Campbell's illumination throws such experiences into depth, opening them to a past that floods new meaning into them.

The Myths For Today

In *The Decline of the West* (1918-1922), a book influential on Campbell, Oswald Spengler describes each stage in a culture's development as having its own spiritual potential. Ours is the late stage of Western culture, which had its first expression in the Gothic cathedrals and Arthurian romances of the thirteenth century. In our current stage, the potential is for individual inner spiritual development. All of the world's myths and images are available to us as material for our own inner journey and Campbell illuminates the vital material for this journey. In *The Inner Reaches of Outer Space* he writes:

> The old gods are dead or dying and people everywhere are searching, asking: What is the new mythology to be, the mythology of this unified earth as of one harmonious being?
>
> One cannot predict the next mythology any more than one can predict tonight's dream; for a mythology is not an ideology. It is not something projected from the brain, but something experienced in the heart, from recognitions of identities behind or within the appearances of nature, perceiving with a love a "thou" where there would have been an "it." As stated already centuries ago in the Indian Kena Upanishad: "That which in the lightening flashes forth, makes one blink, and say 'Ah!' — that 'Ah' refers to divinity." □

Joseph Campbell's Books

The Hero With a Thousand Faces, 1949, $9.95 postpaid from Princeton University Press, 41 William Street, Princeton, NJ 08540; 609/452-4900.

Campbell's major work. Here his concern is with the archetypal hero journey: "A hero ventures forth from the world of common day into a region of supernatural wonder: fabulous forces are there encountered and a decisive victory is won: the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man."

This is not only the story of Buddha, Christ and Mohammed, of the characters in legends, fairy tales and novels, but also the story of each of our lives.

> It would not be too much to say that myth is the secret opening through which the inexhaustible energies of the cosmos pour into human cultural manifestation. Religions, philosophies, arts, the social forms of primitive and historic man, prime discoveries in science and technology, the very dreams that blister sleep, boil up from the basic, magic ring of myth.

The Masks of God, in four volumes: *Primitive Mythology, Oriental Mythology, Occidental Mythology* and *Creative Mythology,* 1959 to 1968, $34.80 ($37.80 postpaid) from Viking, attn: DMO, 299 Murray Hill Parkway, East Rutherford, N J 07073; 800/631-3577.

In this monumental work, Campbell surveys the sweep of human experience, from the emergence of human beings to shamanism to the first high civilizations. Then he looks at the great divide between East and West. In the beginning of *Occidental Mythology* he writes:

> Throughout the Orient the idea prevails that the ultimate ground of being transcends thought, imaging, and definition. It cannot be qualified. Hence, to argue that God, Man, or Nature is good, just, merciful, or benign, is to fall short of the question . . .
>
> The supreme aim of Oriental mythology, consequently, is not to establish as substantial any of its divinities or associated rites, but to render by means of these an experience that goes beyond: of identity with that Being of beings which is both immanent and transcendent; yet neither is nor is not . . .
>
> In the Western ranges of mythological thought and imagery, on the other hand, whether in Europe or in the Levant, the ground of being is normally personified as a Creator, of whom Man is the creature, and the two are not the same . . .

Thus the major themes are laid out. In the East, divinity, human being, and nature are one. In the West, the three are in opposition.

The last volume, Creative Mythology, brings the Western mythological tradition up to the present, showing mythology's struggle against the confines of theology in the history of Christianity and its confrontations with the starkness of science.

Myths to Live By, 1972, $4.95 ($6.95 postpaid) from Bantam, 414 East Golf Road, Des Plaines, IL 60016; 800/223-6834.

A good, highly readable introduction to Campbell's work. The immediacy of mythology in our lives today, as seen through the space-time of the mythological dimension continually intersected by that of chronological time. Campbell explores the contrast of East and West, love, war and peace, drugs, the Moon walk, and the inward journey.

> We may think of ourselves, then, as the functioning ears and eyes and mind of this earth, exactly as our own ears and eyes and minds are of our bodies. Our bodies are one with this earth, this wonderful "oasis in the desert of infinite space"; and the mathematics of that infinite space, which are the same as of Newton's mind — our mind, the earth's mind, the mind of the universe — come to flower and fruit in this beautiful oasis through ourselves.

The Mythic Image, 1974, $19.95 postpaid from Princeton University Press, 3175 Princeton Pike, Lawrenceville, NJ 08648; 609/452-4900.

Here Campbell addresses the world as dream, the cosmic order, inner realization, the sacrifice, and the awakening. The theme is that there exists in each of us a self that can be

in touch with a higher dimension of oneness. He weaves together East and West, ancient and modern, in a text profusely illustrated with images from all cultures, since much of the world's mythology and wisdom is contained in art. In discussing the world mountain — the pyramid — he writes:

> . . . In the view of the old Sumerian astronomical observers, the universe was neither flat nor a sphere, but in the form of a great mountain, marked in its stages from an infinite sea; and it was this glorious world mountain, marked in its stages by the orbits of the circling spheres — the moon, Mercury, Venus and the sun, Mars, Jupiter, and Saturn — that the imposing temple towers were designed to reproduce in local, visible form.

Flight of the Wild Gander, 1969, $7.50 ($8.75 postpaid) from Kampmann & Co., 9 East 40th Street, New York, NY 10016; 212/685-2928.

A collection of essays. In one, "Symbol without Meaning," Campbell confronts the modern condition. He contrasts the role of the shaman, "one who, as a consequence of a personal psychological crisis, has gained a certain power of his own," with that of the priest, " the socially initiated, ceremonially inducted member of a recognized religious organization . . ." Commenting on today he writes:

> Within the time of our lives, it is highly improbable that any solid rock will be found to which Prometheus can again be durably shackled, or against which those who are not titans will be able to lean with confidence. The creative researches and wonderful daring of our scientists today partake far more of the lion spirit of shamanism than of the piety of priest and peasant. They have shed all fear of the bounding serpent king. And if we are to match their courage, and thus participate joyfully in their world without meaning, we must allow our own spirits to become, like theirs, wild ganders, and fly in timeless, spaceless flight — like the body of the Virgin Mary — not into any fixed heaven beyond the firmament (for there is no heaven out there), but to that seat of experience, simultaneously without and within, where Prometheus and Zeus, I and the Father, the meaninglessness of the sense of existence and the meaninglessness of the meanings of the world, are one.

Historical Atlas of World Mythology, Vols. I and II, available in Fall, 1988 from Alfred van der Marck Editions, 1133 Broadway, Rm 1301, New York, NY 10010; 800/999-2665.

The human condition as a vast geo-historical drama, depicting the rise and spread of the great themes that animate human life.

The fabulously illustrated and produced first volume of the *Historical Atlas,* entitled *The Way of the Animal Powers,* presents the beginnings of life on Earth, our evolution to human beings, the recognition of the mystery of death, and the spiritual separation of human beings from animals.

Subsequent volumes of the *Atlas* are planned and are still being worked on despite Campbell's death. They will deal with the emergence of agriculture and its myths of sacrifice of the animal and the god, which we see from New Guinea to Calvary; the rise in Mesopotamia of the first cities and the establishment of priesthoods with their strict observation of the heavens, writing, mathematics, and the following of the cosmic rhythms; and the replacing of the image by the text around 500 B.C. so that what had previously been immediately experienced now becomes philosophy. He traces this development through the Renaissance and into today in our world of narrowing perspectives and expanding horizons.

The Inner Reaches of Outer Space: Metaphor as Myth and as Religion, 1986, $16.95 ($18.45 postpaid) from Alfred van der Marck Editions,1133 Broadway, Rm 1301, New York, NY 10010; 800/999-2665.

Myths, Campbell contends, are metaphors. Of what, then, are they metaphoric? What is a metaphor? How do myths work? Where do they originate? Here he answers these questions.

Historical and technological forces have broken the old horizons that separated and defined groups, and have placed the peoples of the earth in one world. Religions have traditionally been horizon bound because they took their symbols to be literal — Christ was born of a virgin on an historic date, was crucified, resurrected bodily, and ascended to heaven.

But, if we are to survive in this world without boundaries, we need a new way of seeing religion. The deity must become "transparent to the transcendent," and point beyond itself. For Campbell the Fall is metaphoric of our movement out of oneness into the duality of the phenomenal world, Christ's birth is metaphoric of the potential birth of spirit within us, and Christ's resurrection is metaphoric of the transcendance of duality into oneness again.

> . . . Where those bodies [of Christ and Mary] went [when ascending to heaven] was not into outer space, but into inner space. That is to say, what is connoted by such metaphorical voyages is the return of the mind in spirit, while still incarnate, to full knowledge of that transcendent source out of which the mystery of a given life arises into this field of time and back into which it in time dissolves.

Dextra Dei (the Right Hand of God). Design on stone cross. Ireland, 10th Century A.D.

Non-Print Sources

The Hero's Journey: The World of Joseph Campbell, $49.95 for individuals ($350 for institutions) from Direct Cinema, Box 69799, Los Angeles, CA 90069; 213/652-8000.

A film available on videocassette presenting Campbell's life and ideas, richly illustrated with the images he talks about.

Interviews of Joseph Campbell, by Michael Toms. $9.95/one-hour, $15/two-hour segment from New Dimensions Foundation, P. O. Box 410510, San Francisco, CA 94141.

A series of one- and two-hour interviews focusing on the role of myth in our lives today, available on audiotape cassette. Write for ordering information.

Interviews of Joseph Campbell, by Bill Moyers, $49.95 each (one-hour segment) from Public Affairs Television, 356 West 58th Street, New York, NY 10019, attn: Diana Warner.

Two series: the first is two one-hour interviews, the second is six one-hour interviews prepared for broadcast on P.B.S. television stations. ■

A TREE READY FOR ANGELS

BY GAIL MOEN CONGER

ILLUSTRATED BY JIMMY ILSON

MY FATHER KNOWS THIS IS HIS LAST CHRISTMAS. I know. We do not talk about it, but the tree is particularly grand this year. There has been a revelry of presents until even my children begin to open them as a task. By evening my hands are somehow more empty than before, aching.

He begins to speak about his grandmother. I have never heard him speak about his grandmother. I know that my father was a bruised child, lost in small city rooms with a psychotic mother's static. I know that his father drove beer trucks for long hours during the Depression and that he died early, thankfully. I know that my father still wears the boy's bruises, sunk down through skin into his blood. His blood is killing him now, but the boy will not cry.

The author lives in rural Andover, Minnesota, north of the Twin Cities. She sent this memento mori *as a reminder that Death is cloaked in wonder, a trickster who is not above including a few harps and wings for effect if need be.* —*Kevin Kelly*

Her name was Carrie and she lived in one room upstairs in their house. My father believed all these years that Carrie's husband died of a burst appendix while walking down the street. I remember hearing that. When I was a girl I told all my friends about it and we wondered at the mystery, the suddenness of death. It wasn't true? No, it wasn't true, my father says. A distant relative recently explained that Carrie's husband was crippled with rheumatoid arthritis and got mean, violent. He was finally put in a home, forgotten by all but Carrie, who wanted to forget.

Carrie was the only softness in the boy's life. She made him potato pancakes and gave him dimes for the movies. My father says "potato pancakes" as though they were to him another kind of food. "It tore at my heart to see her on her old knees at the state capitol building, scrubbing the stone floor with a brush, scrubbing those stones one by one. She made that whole capitol shine." My rough father tells it gently, and his eyes mean Carrie was making something else to shine.

"All those years," he says, "All those years I never heard her speak but once. She spoke my name. She was in her bed dying and I went in. She sat up to look at me and said 'Gene,' then laid down and died. It was the only time I ever heard her speak."

"What do you mean," I ask, incredulous. "What do you mean she never spoke? Why?"

"I don't know. She just never did. I thought maybe she only knew Norwegian, but others came to the house talking Norwegian. Carrie never spoke."

"Maybe she was deaf," I say.

My sad uncle who plays the flute, who used to think he was Christ then became a Catholic, remembers. (I think it was the incense and ceremonies, absolutions, which helped him more than psychiatry.) The memory splashes water on his perpetually half-sleeping face. He wakens and takes a long healing drink then says, "Carrie wasn't deaf. One time she gave me a dime. I put it in my glove but when I took it off the dime fell in the snow. So I went back to Carrie and said, 'My dime fell in the snow.' She gave me another dime . . . She understood," he adds softly.

How do you find a dime in the snow? The more you dig, the further it falls. When I was a child I suddenly turned into a little boy with a penny at Christmas, a penny like the wiseman's gold, so precious. I remember walking to the store over snowy fields with that penny. Climbing over a fence, I lost it in the snow. A well, a winter of snow, and it was more than my hand that ached. The whole world ached for that lost penny.

"That was a story in the big red book when we were little," says my older sister. "Don't you remember that big red book?"

I don't remember that. I only remember my empty hand, the old store without a penny for it. I remember that. The snow began to fall again, easing my loss, and I suddenly knew the world was wise, that God was making the snow begin to fall. With that knowledge there was a silence in which I could not speak. Spring finally came and the penny was there, shining hard in the mud. But that penny had already bought me something I could never lose.

Carrie's word must have been like that, a lost penny found in the spring. Did she die with it in her hand? Maybe, just maybe, she had time to pass the penny on. I want these stories now, before this season is past and they're all packed away. I will hold them shining in my hands to take out next year for my own children.

IT IS THE DAY BEFORE EASTER. My father has a seizure. My sister and I race to join my mother at his bed. I do not need to ask questions. My father cannot move, speaks only with his eyes. My hand knows death in the impossible coldness of his arm and recoils of itself from recognition of its own mortality. His eyes go away, rolling upward, then struggle back again to say good-by. A nurse comes to draw blood for tests, uneasy to tread this realm of death where technology cannot save. My father weakly nudges his helpless hand away from the needle. "Leave him alone!" my sister sobs. She cradles his head and my father bends it toward her, moaning the anguished love he cannot speak, the love he could never speak in life.

Yesterday, Good Friday, I kept waiting for the clouds, but there was unmitigating sun when my father went back into the hospital. As he sat in bed, having no words I simply hugged him. "Thank you," he muttered with feeling, "thank you." Those last words to me were with a poignancy, finality, that I refused to understand. It was confusing, this dying man who thanked me for affection. This was not the big muscular man I grew up with, now wasted to nothing by leukemia, lymphoma, chemotherapy. This gentle man was not the harsh tormented soul who fought much and cried little, who always stood defiant and alone.

Last night I sat outside with my mother, and in the quiet tried to cull the missing pieces of my father's life. Hadn't he been in the Coast Guard in World War Two? "He was discharged," my mother said, "and he only confided the real reason to me a couple of years ago."

She related that my father had night sentry duty

when a friend crossed the gate without a pass, determined to go out and see his girlfriend. He told my father, "Shoot me if you have to, I don't care. I'm going." My father was discharged because he didn't shoot his friend, but raged against the insanity of the world. I can tell my mother is proud of him for that. But he kept on raging all his life, even against us who loved him, who sometimes could not love him. Our home was mined with my father's moods. We learned early how to walk on psychic eggshells.

The nurse holds my father's wrist and says, "He's barely got a pulse." We already know; each breath in the oxygen mask is a violent exercise and my father is consumed by the extremity of dying. I suddenly recognize this realm my father's entered. It is the place where I pushed two children into the world, where all must go alone and our little wills are caught in larger currents. Now my father's moving swiftly out to sea and I stand onshore helpless, trusting there is land out there somewhere. We become strangely calm, as though waving scarves in some familiar harbor at a disappearing ship we know will come again. We stand as though there were all the time in the world, too much of it perhaps.

My mother becomes restless, looking for things to do. She does not see when he lifts his arm toward her with desperate exertion, forcing life back into a limb too cold for life. "He wants to hold your hand," I tell her. Perhaps my mother doesn't know what he is saying with that gesture, or she is not yet ready to forgive the many times he never met her outstretched hand.

My mother's heart was never mended properly after my father abruptly left the ministry, undone by his endless cycles of rage and guilt. My father, stubborn Lutheran, believed there was a pattern to his life and even if he couldn't fathom it, he still would trust. But my mother was left emotionally abandoned with three young girls and an uncertain future without patterns.

Since one night many years ago, I could never stay angry with my father very long. In the midst of one of his rages, I don't remember what it was about — not that it ever mattered what he said it was; I always knew that it was something else, something deeper that one had to probe for with surgeon's fingers — he suddenly fell down onto the kitchen floor and sobbed as I never knew a grown-up could, an utterly broken and forsaken child. My mother sat immobile in her chair, remembering her garden long gone to weeds, the dampened earth and trowel when her hands still had feeling in them. My teenage eyes awakened to a suffering besides my own.

They want to pour more things into his veins. My mother says no. My sister and I say no. The pastor comes, so we take off the oxygen mask. I think this is what my father is waiting for; yesterday he said that he would like to take communion. His eyes roll wildly, unfocused. The pastor calls him back, grabbing him at the shoulders and speaking loudly. My father thrusts his eyes one last time into the world and comprehends, and then I know he can no longer see. ". . . the blood of Christ shed for you . . . " My father puts out a frantic tongue so very far to take the wafer dipped in wine, as though his very life depended on it.

Immediately his eyes close, he stops fighting for his breath. We all instinctively are silent to let him go where he must go alone. Ten seconds to a rasping breath, then more . . . We watch his breathing numbly for perhaps a minute, then wait for another breath that will not come. His mouth moves as though it would draw air of itself but can't remember how. That air begins to fill another sail. Calling us back from the harbor's edge we have followed my father to is the doctor's voice like a splash of freezing water. I did not even know that he was there. "The mouth movement is only a reflex. He has no pulse. There is no heartbeat."

This is the moment we always said we knew would come, but did not know.

THE FOLLOWING SATURDAY we drive to the arboretum, my mother, sisters and I. Just two weeks ago my mother asked what to do with my father's ashes. "We'll talk about that later," my father said. He always believed there was more time. Only days ago did he admit that he was dying, when he could no longer eat, no longer stand unsupported. "I have no interest anymore," he confided two days before he died. "No interest," he repeated to himself, marveling. He mentioned once before that his ashes might be buried by an oak, and he spent most of his last year looking through a window at the trees. So now my mother carries a light cardboard box into the woods just erupting into green.

We already had the service at the church, with people we barely knew and my father's body on display like a cosmetic mannequin. It was better, and more honest, when we saw his body at the hospital cold and pale, deserted.

There were people from the office where my father toiled as an overloaded probation and parole agent 20 years, utilizing his anger for good. He had an amazing 80-percent success rate with his clients, but the administrators only cared about the paperwork my tired and headstrong father no longer kept up with. He decided to retire early a year ago. My younger sister told me at the service that there was only an informal lunch on his last day and, frightened to displease

the angry administrators, no one even offered to pay my father's check. He left the restaurant first, leaving the check on the table. "I don't know who's going to pay for this," he said. They all looked guilty at the service, but none of them knew my father was ill. He never even told his brother or sister, for the same reason he didn't want a death announcement in the paper: he believed no one would care.

We walk off the main path and choose a large, scarred old oak that stands apart. We take turns digging with a trowel near the roots, and as my mother digs I know that feeling is returning to her hands. I gather wild violets, columbine pushing through the cover of last year's leaves. When the hole is deep enough, we read the Psalms my father marked and underlined over the years; the anguish of David's songs had always moved him. As we read, even the wind hushes.

Then we open the box and metal container to find small multicolored chips of white and orange and brown. My mother pours the body she slept beside for 40 years into the ground where roots reach out like fingers, encircling. "It's appropriate," she notes, "that the roots are there." We each put dirt back in, and flowers on the top. There is no other marker here for a man's life, a man's struggle. My sister looks for a rock but cannot find one. It is all right. It's not such markers that matter now.

The wind comes alive again, subtle as air from wing-beats. When I visited last Easter and parried with my father in our usual philosophical arguments, he suddenly, out of context, related something from the newspaper. Five Soviet astronauts had returned to Earth, swearing they'd seen angels with wings the size of jets. They said the angels looked as though they knew a secret that they wanted to convey.

The next day I told this story to my husband's grandmother, a simple and down-to-earth woman, a widow who's lived in the same house 60 years, a few miles from the farm where she was born. She doesn't like to go into the city. "All that noise," she says, "so many crazy things." When I told her the newspaper story she carefully scrutinized my face, and apparently finding no skepticism there, her manner changed. "Well then," she confided, "I'll tell you something that I've never told a soul." She leaned forward and lowered her voice, smiling. "They would just think I was crazy," she declared.

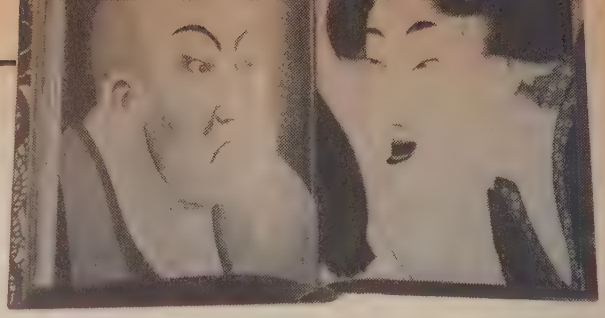
Several times in recent years, she said, when she was in her bed and wide awake, the angels came. She spoke softly, as much to herself as me, marveling still, and her eyes shone. "You could hear their wings going whoosh whoosh over my bed. They was just a-singing to me." What did they look like? "Why, they looked like angels," she replied, her surprised demeanor suggesting she may have betrayed the experience by using feeble words on feeble ears.

And how can I begin to describe the pattern I finally see at the end of my father's life? Like the boxes of unfinished novels he wrote, the finely woven themes are of guilt and grace, suffering and transformation. I am the last to go, but turn around again as some unearthly wind surges against my face, like air from wing-beats. There, under the oak, is a sudden light, a sense of fire, and I have the brief impression of someone kneeling to gather something.

The hidden roots reach out, gathering unseen nourishment, and now in the proper season come the buds, glorying openly. I finally turn to leave. ■

BACKSCATTER

echoes from readers back to *Whole Earth Review* (27 Gate Five Road, Sausalito, California 94965)



The accessible Japanese landscape

My own perspective on landscape (*WER* #58, p. 4) is based on five years of living here in Japan. Before that I grew up in the Canadian mid-west, but my cradle language is Dutch. European influences on me are thus small but present. I use the term "American" to refer to both Canadians & USA Americans.

The Japanese landscape is much less centered around cars. The success of the Japanese auto industry is ironic in that Japanese themselves own only a fraction of the cars that Americans do. Only about 30% of Japanese families own cars.

Japanese are required by law to have vehicle inspections every two years which costs more as the car gets older, but starts at around $1,900 (¥250,000). A drivers license costs about $2,300 (¥300,000). Further, parking does not have the prominence JB Jackson remarks on. My apartment lease, for example, stipulates that I may *not* own a car. Several of my neighbors violate this agreement, and rent parking spaces away from the building. Their rent is about $1,076 (¥140,000) for the apartment and $307 (¥40,000)/mo. for the car space.

In most places in Japan, one must provide proof that you have a parking space before a dealer may sell you a car.

Of course, part of the strangeness of coming to a foreign culture is the strangeness of the landscape. One's first contact tends to make you more aware of your own native landscape.

In Tokyo, city life is organized around subway stations (or train stations). Each station has a collection of shops and services. When you ask someone, "Where do you live?", the common response is a station name. There are fads for living at a particular station. Right now "jiyugaoka" is popular for young people.

Connections to one's native landscape jump out by contrast. In Japan many are available; the largest convenience store chain in Japan is 7-11 and McDonalds and Kentucky Fried Chicken dominate fast foods in Japan. Drive-in versions of these businesses, however, are very rare.

Since cars are less common their functions are replaced by other services; trains & subways are obvious. However, other less noticeable differences exist. Japanese stores wrap purchases much more carefully, packages often have carry handles, clerks are experts at putting sets of handles on objects as large as TVs, strong bags are the norm and there is no charge; people have to carry the packages by hand, much further and longer.

Delivery services are also much more common and relatively cheap. The post office provides standardized boxes and fast delivery.

On the other hand, road quality is poor, traffic control is ineffectual, accident rates are high. Most streets in Japan do not have sidewalks.

Also much rarer than in America is the car lot. Toyota sells 80% of its cars through door to door sales here. And the high costs of inspection for old cars means there are almost no used car lots in Japan.

John Elemans
Tokyo, Japan

Condom vending machine update

This is a bit pedantic, since the caption referring to the Japanese condom vending machine in "Using Condom Sense for Safer Sex" (*WER* #58, p. 98) was a sideline, but it was almost completely wrong.

A dozen condoms in Japan does not cost 500 Yen, and 500 Yen is US$3.91 (todays exrate) not US$2.50. A dozen condoms varies in price from ¥1,800 (US$14) to ¥4,000 (US$31). While street machines are not unheard of, they are not that common. A close look at the picture shows a price of 500 Yen, that is probably for 1-3 condoms, quite pricey; probably emergency use only. *[This part of the caption was correct. I took the picture of the machine and bought 12 condoms for 500 yen. —KK]* Condoms are commonly sold in grocery stores and drug stores, but most sales are made by door to door salesmen.

Condoms in Japan are sold in two thickness .3 mil and .5 mil. Clearly the risk factor is left up to the customer, I don't know which are more popular.

The most common form of birth control used in Japan is abortion (at least 60% of fertile women in Japan have had an abortion) followed by condoms. The pill is banned from use here, the result of a successful lobby by doctors who make BIG bucks from abortions, paid for by government health payments.

The notion that Japanese are more open about sex is one which probably requires a whole article. I think it is completely incorrect, the result of interpreting behaviours out of context.

Japanese, for example, think that Americans are much more open about sex! In fact Americans are typically portrayed as sex crazed. Why? One common reason given is that American women dress like whores.

"Drawings and prints of a sexual nature are an accepted art form . . . "

Ukiyoe prints which depict sex are actually banned in Japan. These "Japanese" art works which are shown in galleries in other countries may not be shown, purchased or owned here.

I recently ordered a copy of *The Whole Birth Catalog* from the US. When it arrived I was notified that it was being held. I was told that it contained unacceptable photographs (pubic hair) and was requested to report why I was importing restricted materials into Japan. It was held for special judgement by customs authorities and eventually released.

John Elemans
Tokyo, Japan

What to write about instead of war games

Please publish more on the native, extra-national, tribal peoples, especially our own natives. The mainstream press doesn't do it because it's more fun to blame Africa, and safer. Also, it isn't worth money to print. The natives here surrendered this land to us in exchange for promises which we never kept. Then we stifled them and quieted them until their populations began dwindling. To use the only analogy that does justice to the situation, we raped the heart of the nation we found here. We keep her now in the basement, cringing, cold, starving and lonely, not knowing when the next rape may come. That is what war games are really about. Write about that.

Cathy Naylor Seitz
Arcata, California

Cyberdelic

The winter 1987 Signal issue of *WER* was a great guidebook to the information age. Thanks for putting together this collage of stuff. Despite my pleasure in swimming through it, however, I was disappointed by the feature on fractals. The contents page teaser referred to "shamelessly psychedelic computer graphics." I thought the article would be that expose I've been waiting for, the one that reveals to the world that fractals *are* shamelessly psychedelic computer graphics.

What I imagined "they" had finally done was translate the patterns of psychedelic hallucination into computer graphics.

Not only is the visual texture of fractals psychedelic, but also fractal mathematics itself. Fractals are geometric forms that have fractional dimensions. Unlike a line, which is one-dimensional, or a triangle, which is two-dimensional, a fractal might be 1.26-dimensional. Because we live in a world in which the dimensions of physical forms occur in integer increments, a fractal in some sense represents a metaphysical form. Consequently, the manifold matrices of psychedelic hallucination may provide a framework on which to construct the metaphysics of a secular humanist religion.

McLuhan and others have commented on the audiomagical compatibility of electronic and archaic cultures. Perhaps the most primitive religious traditions, hallucinogenic shamanism in particular, provide utilitarian models for our time. The antidote for "future shock" may be not the curtailment of technological proliferation, but rather the acceleration and diversification of neurological activity to cope with that proliferation.

If "psychedelic" is too culturebound to the groovy 1960s to make the transition to computerese, maybe we need a new term. Maybe fractals are "cyberdelic."

Kenneth Jopp
Saint Paul, Minnesota

If these drugs had bottles, here's what the warning labels would say

I have been a big fan of your magazine for many years now, and I am a firm believer in the principle that the free exchange of information is a necessity to the survival and progress of our species. I commend you for your efforts in this area.

Unfortunately, when it comes to psychopharmacology the old saying, that a little knowledge is far more dangerous than none at all, is quite often true. Specifically, I am referring to the article of winter '87 on page 56, "Cognitive Enhancers." I am not upset that you would print this sort of information; there is both interesting and important research going on in this field right now. What I object to is the uncritical, inaccurate, and incomplete information given in an area that has *serious* implications on your readers' health. Here are some errata and addenda for that article, most of this information is available in the *Physicians' Desk Reference* and the *Merck Index*.

Vasopressin — It is a naturally occuring peptide that can cause a wide variety of effects beyond those mentioned in the article. It strains the heart by reducing the heart's food and oxygen supply and increasing the heart's workload by increasing blood pressure. In individuals with hidden or overt heart problems, this can mean a heart attack. In addition vasopressin can cause a dangerous elevation in brain fluid pressure, leading to stroke, coma, or death. Also it can produce vertigo, circumoral pallor, pounding headaches, cramps, diarrhea, gas, nausea, vomiting, urticaria, difficulty breathing, anaphylactic shock, and normal shock. It is dangerous to use in people with a history of epilepsy, migraine, asthma, heart failure, or poor kidney function. Vasopressin can have dangerous interactions with most stimulants, including pemoline, caffeine, diet pills, and cold medications. Overall vasopressin is a real Pandora's Box, but fortunately there is ongoing research to develop safer and more effective alternatives.

Choline, Inositol, Vitamin B6, Phenylalanine, and Deaner — These compounds are both basically safe and effective if not spectacular. I would add a few notes though. Use caution with these if you have a history of epilepsy. Choline may be more effective when not taken with inositol. B6 is more effective and better for you when taken in wide spectrum mega-B vitamin supplements. Phenylalanine is neurotoxic and can cause brain damage in about 2% of the population, and it's probably not good in large doses for anyone. Tyrosine on the other hand is not toxic and is a more effective substitute. Deaner can be made more effective by combining it with methionine, but be cautious of large doses of methionine if you have a history of psychosis. In addition, there are other nutrients that are safe and effective in increasing psychological energy in most people, Inosine, Cytochrome C, Lysine, and Ginseng.

Hydergine — It is an ergot alkaloid, the same chemical class as LSD, but with no psychedelic or immediate effects. It is currently prescribed to help alleviate some of the symptoms of Alzheimer's disease, but, despite the tremendous numbers of people with this affliction, Hydergine is not widely used, mainly because it is only effective in about 1/3 of the people using it. As a matter of fact it worsens cognition in about 1/3 of people. It is dangerous to use in individuals with any history of psychosis, psychosis, low or high blood pressure, heart disease, pregnant women (at any point in the pregnancy), or a history of migraines. Hydergine has caused rashes, drug fever, headaches, dizziness, vision problems, appetite loss, nausea, vomiting, cramps, fainting, sluggishness, drowsiness, emotional withdrawal, apathy, nervousness, hostility, confusion, depression, weakness, collapse, and coma.

Euphoria — The section on Euphoria is really in a muddle. First of all it is not clear what Euphoria is. The chemical structure shown in the article is MDA (methylenedioxy amphetamine), a drug rejected long ago by both psychologists and users as inferior to MDMA (XTC); it is also *highly illegal*. The other name given for Euphoria was 3,4-Methylenedimethoxy Methamphetamine. This is an impossible chemical structure. Technically speaking, a chemical structure can contain a methylenedioxy group *or* have 2 methoxy groups; there is no such thing as a methylene*di*methoxy group. None the less I can guess about Euphoria's toxicology from the effects R. U. Sirius describes and the class of drugs to which he claims it belongs. Like crystal methedrine it is almost certainly capable of precipitating paranoid psychosis, even in psychologically stable people. Though Sirius noticed no crash, he may have just been lucky. Amphetamines almost always have a crash. In general they also create tremendously large egos, and over confidence, so *no* judgement on mental improvement made by people under their influence can be trusted. Finally Euphoria is relatively untested, both scientifically and on the street. Its long and short term health effects are unknown but based on its chemical structure it would not be unreasonable to expect it to cause heart damage, brain damage, liver damage, kidney damage, or cancer. I do not expect Euphoria to be any better than Coke or Speed, in the long run. I don't mean to sound cruel or cynical,

but let some lab rats die before you put your neck on the line.

Pemoline is an interesting drug at the center of some current research. Unfortunately, it is not known how the drug works. If it was, a safer alternative could be found. Pemoline has caused fatal liver failure, still births, La Tourette's Syndrome, seizures, hallucinations, uncontrollable movements of the tongue, lips, face, eyes, and extremities, depression, delirium, dizziness, irritability, headaches, drowsiness, insomnia, anorexia, nausea, and cramps. Caution should be used when combining it with any other drug because it is known to have strong, dangerous interactions with many drugs. Finally pemoline, a controlled substance, is recognized by the government as having an abuse/addiction liability.

PRL-8-53 — I could find no information on this, even in the most up to date references. The fact that it still is referred to by its code number probably means that it is still highly experimental; they may not even know what its structure is yet. It might be safe, but you are playing neurochemical roulette.

THA — This is potentially very dangerous. It is an acetylcholinestrase inhibitor making its actions closely related to Nerve Gas, Pesticides and Strychnine. *Be Careful!*

I wish you all good luck in your quest for personal growth. I am sure in the near future science will come up with many things to help you. Please do not let enthusiasm interfere with accuracy and safety.

Name withheld upon request

Non-computer networks

It was with great interest that I read of the M2Ms (*WER* #57, p. 82) that are created as an alternative to online computer conferences which, in my opinion, are both too expensive and lacking in the time needed (at least for me) to reflect on the subject being discussed. But what really interested me was that M2Ms seem to approximate the spreading of ideas in a Third World country.

As a Peace Corps volunteer in Sri Lanka, I was an aggie/community development volunteer working in a newly developed (from cleared jungle) rice irrigation scheme. Mail took about a week in each direction when writing anyone from outstation. Add in the factor that telephones are rare and service from where I was was limited to two phones in a 2,500 square kilometer area, letters were *the* medium of communication when exchanging ideas.

And if you were exchanging ideas with more than one person the best way was to write one person who would consider the idea and then write back to all the persons involved. While it was slow and sometimes very frustrating, it did work rather well on the whole! And it gave everyone time to carefully consider a planned action before making a final decision. The time to consider a subject is one of the problems of our so-called First World society.

Tracy Eldridge
Orland, Maine

Great books of media culture

Hi, Stewart —

you might remember me (Mike Hawley, living in Minsky's attic, programming computerized Bosendorfers, ex-Lucasfilm, now part-timing with Steve Jobs at NeXT; we spoke once briefly on the phone). Among other things, I've a hobby of casting books into electrons (an ambition is to put all of my doctoral reading list on-line). Part of this hobby includes compiling a "core"-type reading list of great books that Media Lab members should know. This includes things like seminal texts in computing (e.g. Shannon, Turing, von Neumann), texts concerning media (McLuhan is an obvious one there, as is yours, but also things on the invention & technology of paper, print, etc.), texts on psychology and communication, texts on scientific (r)evolution (e.g. Watson's cute memoir on the discovery of DNA). Given your tastes, you're bound to have an interest in this . . . I thought maybe you'd like to contribute your own top 20 (or top 50, or 100) books for this bibliography. So, if you would be so kind, if you could pick *n* books to be scanned in (OCR) before being marooned on a desert island with only a PC, what would they be? I'll be happy to compile them into the list.

thanks,
Mike

Mike,
Right at the top of my list would be Arthur Koestler's Act of Creation. *On how discovery of every kind really occurs in the mind. His most lasting contribution.*

Buckminster Fuller's Ideas and Integrities, *not top of the list, is good on conducting a productive and morally rewarding research life.*

D'arcy Thompson, On Growth and Form, *abridged edition probably ok; still relevant, and peerless lone-wolf deep intellectual adventuring, superbly written.*

McLuhan Understanding Media, *of course. Though his funnest book is out of print and very graphic,* Culture Is Our Business.

Ithiel de Sola Pool, Technologies of Freedom.

Daniel Boorstin's The Discoverers, *the only history of the world really relevant to scientists and engineers. Great stuff on history of the scientific process and books/libraries.*

Strunk and White, The Elements of Style, *on the right use of language.*

From left field, Zen Mind, Beginner's Mind, *Suzuki-roshi.*

Application of same: Zen and the Art of Motorcycle Maintenance.

Not everybody's cup of high tea, but mine: Gregory Bateson, Steps to an Ecology of Mind.

The dark side of communications, never better drawn, and short: E. M. Forster, The Machine Stops.

Now tell me what you've got for the list from others so far . . .

Stewart Brand

Corrections for Issue 58

We neglected to state that "Strangers and Strangeness" on page 18 was reprinted with permission of Geographical Review, Vol. 76, No. 4, October 1986 and that further reproduction in whole or part is prohibited without written permission from the American Geographical Society, 156 Fifth Ave., Suite 600, New York, NY 10010-7002.

The video we called "Common Sense" (page 101) is actually titled "Condom Sense," and costs $400 instead of $450 as we stated. On page 49 we reviewed Daybreak, *a journal dedicated to indigenous cultures. As an illustration from the pages of* Daybreak *we ran the logo of PARR, without identifying that PARR is a racist, anti-Indian group, in complete contradiction to the goals of* Daybreak.

In "Toward Artificial Life," one of the captions on page 76 states that Peter Broadwell of the Media Lab's Vivarium Project developed a computer "Fishbowl." Wrong. 1) the project was in fact called "Plasm: A Fish Sample," 2) Peter Broadwell does not work for the Vivarium, but was merely inspired by a talk by one Vivarium founder, and 3) he had two collaborators, Rob Myers and Robin Schaufler, who joined to create the piece.

Several readers have written to say that they have had mail returned by The New Internationalist, *reviewed on page 107. One has had her checks cashed and has gotten no reply to her complaints mailed to either their overseas or U.S. address.*

Last, but certainly not least, we inadvertently omitted Barbara Beaver's name from the masthead, where it deserved to be for her quick work as pinch-hitter access person.

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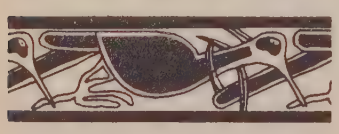

ANNE HERBERT'S book, *Compassion 101,* is now available, by mail order only. If you would like information on the book and how to order it, send a stamped, self-addressed envelope to Anne Herbert, Box 5408, Mill Valley, CA 94942. Viva gentleness!

HAPPY HERMIT, 39, 6', 200, DWM still desires one very cooperative woman (see ads in #35 and #49.) Electronic cottage, rural Smokies. Ignore makeup, fashion, alarm clocks, sports. Combine high tech home work and dumpster raiding. Fulfill more of my fantasies and I'll show you great joy. (Mine! at least.) Extra points for attractive, young, virgin, gardener, hermit. Lee (615) 623-6450.

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You should see the exquisite garden art director Kathleen O'Neill has persuaded to bloom in our small courtyard. The ever-evolving, ever-thickening, ever-blossoming landscape spills out of wooden tubs, and over the gravel that once was there. The incredible botanical range of the plantings (California natives to off-the-shelf petunias) derives from Kathleen's expertise as a regular Friday morning volunteer at Strybing Arboretum, San Francisco's equivalent to the English Kew Gardens.

Since we need to commute between two independent buildings that house the magazine, passing through Kathleen's garden makes that short walk into a prime employee benefit. It also makes it hard to imagine moving, a distant nightmare that looms nearer as the once-ratty waterfront area we work in becomes yuppified and unaffordably high-rent. We are also busily crowding ourselves out by adding more projects.

Adding them all at the same time is actually the real problem. There are four that I know of, though in the frantic scampering there could be more I haven't been told about. In no particular order, here's what's happening.

SIGNAL, the special issue is becoming ***SIGNAL****, the book. Tentatively subtitled: Access to Communication Tools and Information Frontiers. Price and exact pub date in the fall to be announced next issue. Harmony Books, a new im-*

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- **We print ads in the order received.** "UNCLASSIFIEDS" means "no categories."
- **Mail ad and payment (made out to *Whole Earth Review*) to:** Lori Woolpert, WER UNCLASSIFIEDS, 27 Gate Five Road, Sausalito, CA 94965.

David Cavagnaro

J. Baldwin's pet crow Corvus (crows are in the genus Corvus) whispers sweet caws into his ear. Corvus was rescued as a day-old chick from certain death by a marauding raven. J. and Liz Fial hand-fed the chick five times a day. As it grew larger, it needed to eat bones so Liz smashed chicken necks with a sledgehammer to make crow lunches. Corvus liked to join J. as he rode his mountain bike, perched as a passenger on his shoulder. He lived uncaged. On the day of the Harmonic Convergence he joined a passing crow mob, and figured it was a good day to leave. Like most crows, he was a petty thief, and left behind a collection of silverware, keys, and other trinkets he had stolen on the roof of J.'s house.

print of Crown Publishers in New York, is the nervous publisher. Somewhat reluctantly they have gone along with my insistence that ***SIGNAL*** *be oversized, nearly the same page size as the original* ***Whole Earth Catalogs****. They think booksellers won't find a place on the shelf for it. I think it needs to be large to let the page do what Whole Earth does best — teach through browsing. It is meant to be loose, quick and unprocessed, like the original Catalogs. To that end it is being desktop published, a method neither Harmony nor we have tested in full before. In control of the three desktopping Macs at 27 Gate Five Road are three new hires, eyes wild with delight and panic.*

*To introduce them: Richard Kadrey is a cyberpunk science-fiction author with a just-published first novel (****Metrophage****, Ace Books) that an awful lot of people I have run into have been reading. Sally Vandershaf is a science writer who was a researcher for Time-Life Books' series on computers. Sarah Satterlee is the co-compiler of the* ***Goodfellow Catalog of Wonderful Things****, a humongous book of handmade crafts that you can order by mail (see review of newer multi-volume series in* ***EWEC****, p. 199). All three are devouring truckloads of raw data and printing out marvelously complete pages on the LaserWriter ready for pasting up.*

Old hands are putting together ***Fringes: A Whole Earth Catalog of Strange Beliefs and Eccentric Science****, another book jointly signed on contract with Harmony. As our best-selling newsstand issue, "The Fringes of Reason" (****WER*** *#52) will now have a chance to be our best selling book. We'll make millions, resurface the volleyball court, buy better paper to print the magazine on, and have all the crackpots of the world sending us mail again. Behind this instant fame and fortune will be the same folks who created the special issue: editor Ted Schultz, art director Becky Wilson, production manager Susan Erkel Ryan. Due out next year.*

The third project is in mid-air as we toss legal contracts back and forth. Assuming all will go well, we have rented another annex building to hold the operators of the five Macintoshes whose hard disks are spinning out the completed version of the ***Electronic Whole Earth Catalog*** *(see p. 64 this issue). Scheduled for release in early fall, this version of the Catalog is getting a partial update treatment — calls to all manufacturers, ordering information revised, prices verified. After 20 years, the business of skimming off the best of tools and informational books is not a novel job. It's quite Neanderthal at times. We hope we are inventing an easier way to proceed.*

Last but not least, we are overhauling our subscription fulfillment. It simply wasn't working for an increasing number of subscribers. Legitimate complaints of missed issues, or never-received-any-at-all subscriptions piled up too frequently. (Note: We can spare little sympathy for unjustified complaints arising from subscribers who never notified us they moved — you know who you are). The fragile advantage of hiring a subscription agency to do our processing crumbled after our mailings became more complex and small mistakes compounded. To the roll of drum beats we will now attempt to run our subscription list on a Mac II and nine-track tape! In center ring, welcome Paul Davis, the Sub Magician (formerly General Purpose Clerk to all you who have been writing in with problems). Replacing him at the phones and front desk is newperson Susan Rosberg. They will test drive the rig by early summer.

Richard Schauffler (not to be confused with the four other Richards in our small office, including a new Richard [Ditzler], part-time bodyworker, who will be bookkeeping) tabulated results of a trial use of polybag envelopes to mail issues of WER to overseas and Sustaining subscribers who usually get their copies in protective covers. About half of the

Doodle on the envelope of a subscriber writing to us in outrage over a continuing subscription problem. We feel the same frustration. Our new in-house system promises smoother sailing.

recipients claimed they got their magazine in better shape than in paper envelopes. (The ratio would be a lot higher compared to no envelope at all, but we weren't testing that.) About half (not necessarily the same half) thought it was a bad idea to use plastic envelopes, chiefly because of environmental reasons. However, many articulate subscribers wrote to say they didn't think cutting down trees and putting up toxic pulp mills were any less damaging than plastic bags which they used daily, so why shouldn't we? In any case we are investigating the costs of a biodegradable plastic wrapping made from corn polymers. ***Mother Jones*** *(which suffered a revolt among readers for using petrol polybags) and* ***Audubon*** *magazines are reputed to be using biodegradable polybags now. If we can afford these we will probably use them to mail everyone's issues. You'll get 'em without rips, tears, tire marks, or pages missing. And we'll be able to send along customized renewal reminders and the like at a postal savings.*

*Of all the stories this magazine has published in 14 years, none has been as indelible as Ron Jones' true story of how a hip California high school class infected an entire school with a Nazi-like fascism during the peak moments of don't-trust-anyone-over-thirty-do-your-own-thing-question-authority cultural revolution in 1969. His story, first published here in 1976 (****CQ*** *#9) as "The Third Wave," later became a TV movie. Ron told me recently at a basketball game with his handicapped adult team (see his latest story, "B-Ball" in* ***WER*** *#56, p. 30), that the Third Wave story has returned to its archetypal roots and has been made into a play in Germany. The popular play successfully solicits the German audience to tell their own story of how, just as in a hippy high school, a monster grew where none expected it.*

In smaller matters, other echoes return. In a roundup of intelligence tools in ***WER*** *#57, Robert Horvitz reviewed Daniel Brandt's "Power Structure Research Database." Brandt sent Robert a copy of* ***Intelligence/Parapolitics Journal****'s review of Robert's survey: "****Whole Earth Review*** *. . . has published "An Intelligent Guide to Intelligence". . . It is indeed the most intelligent guide to intelligence that we know, and we say this not just because we figure at the top of the list of "better critical journals" . . . In all, a very useful document." Brandt also sent a photocopy of a purchase form he got from the CIA for a copy of his "Database." Evidently they were moved to purchase it by Robert's review. Nice to know we are being read.* —Kevin Kelly

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EXPENSES	
Payroll	$ 28,988
Computer/communications	20,130
Hardware additions/ upgrades	10,541
Promotion/advertising	1,371
Office	3,634
General/administrative	4,244
Total Expenses	**$ 68,908**
INCOME	
WELL charges/ communication charges	81,151
Total Income	**81,151**
PROFIT/LOSS	**$ 12,243**

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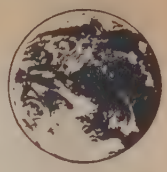

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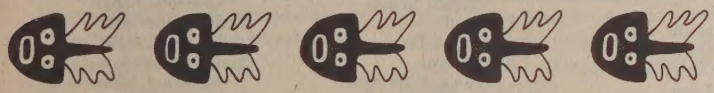

Point/Whole Earth Consolidated Report:

First quarter (January-March) 1988

INCOME	
Subscriptions	$ 99,896
Back issues	612
Mailing list rental	6,146
Unclassifieds	1,051
Direct distribution	18,193
Warner (national newsstand)	8,890
Book sales	3,962
Syndicated column	7,150
Royalties	917
Contributions	2,240
Interest	1,869
Miscellaneous	1,877
Apple income	50,000
Total Income:	**$202,803**
EXPENSES	
Salaries: Editorial	$ 14,544
Production	17,447
Circulation	12,791
Office	10,556
Research	4,377
Outside production services	1,104
Writers/contributors	9,375
Magazine printing	29,134
Subscription fulfillment	10,557
Circulation promotion	15,138
Direct distribution	1,652
Warner (national newsstand)	2,881
Mailing list rental	952
Book fulfillment	297
Book purchases	160
Syndicated column	5,809
Apple project	22,349
Signal book project	8,714
Fringes book project	5,552
CD-ROM project	4,710
Insurance	390
Health insurance	711
Vacation expense	384
Taxes	7,177
Supplies/research	2,843
Equipment rent/maintenance	1,934
Telephone/networks	2,141
Postage	2,877
Rent/maintenance/utilities	10,465
Legal/professional services	140
Interest/bank charges	1,618
Miscellaneous expenses	-125
Total Expenses:	**$208,654**
PROFIT/LOSS:	**-5,851**

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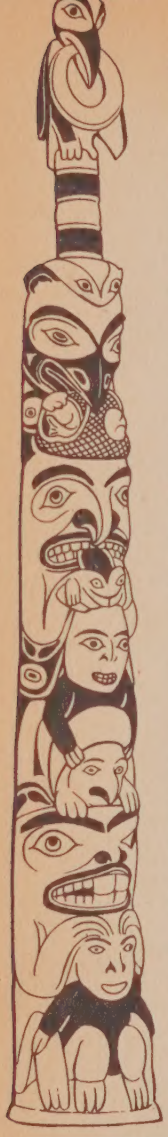
Ann Greenberg
Brooklyn, NY
One anonymous Mystery Preserve



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27 GATE FIVE ROAD, SAUSALITO, CA 94965

1. ***Send them.*** *Address them to* Whole Earth Review, *attention: Assistant Editor, 27 Gate Five Road, Sausalito, CA 94965, and drop them in the mail. We are sitting here, bored as anyone else, reading all the mail, hoping some of it will be good.*

What's good? New, not read a hundred times before, not an imitation of old WER *articles, often a personal passionate statement. Articles that sound like articles are often dead. Consider yourself to be writing a letter to an intelligent, uninformed friend about something that is interesting/important to you. We often print things that everyone, including the author, thought were too odd to be printed anywhere. Remember that we print all lengths from a paragraph to many pages, so don't puff a good, short idea into four tedious pages. And please don't try to please us by creating something you think we'll like. Being hustled is boring. We'd rather print true love — yours for your subject. All things are possible and may be printed. We have no editorial policy for or against any subject matter.*

2. ***Enclose a stamped, self-addressed envelope.*** *That's a courtesy. You are much better at writing your address than we are — all that practice. If you don't address and stamp an envelope for us to reply or return things in, you're asking someone here to be your secretary. If we all did our own clerical work, there would be no secretaries.*

If you are in another country, don't send foreign stamps. Go to your post office and buy an "International Response Coupon" and send it. We take the Coupon to our post office and redeem it for U.S. postage.

Submissions and reviews can be sent to us electronically on The WELL, our regional computer network (Whole Earth 'Lectronic Link), by modem at 415/332-6106, or long distance along Tymnet. Type "go we" and leave a message, or send e-mail to 'kk.'

3. ***Keep a copy.*** *We are careful and good, but not perfect. You should never send anyone the only copy of anything.*

4. ***Be patient.*** *We sometimes reply on submissions the day we get them, but you shouldn't get worried about no reply for about two months. Sometimes we have to show things to our far-flung, part-time editors, and that can take even longer. On the other hand, don't wait a year to tell us you sent something and didn't get an answer. Many manuscripts will have flowed over the desk in that time, and it will be hard to remember what happened to yours or if we ever saw it.*

5. ***Be legible*** *and put your name and address on the first page of the manuscript. Those are all the rules of form we have. It's helpful to type if you have a typewriter (please double-space), but handwriting is fine if it's very neat. The name and address are so you don't become a mystery person if your envelope gets separated from your manuscript.*

6. ***Avoid query letters.*** *Query letters are what writers' magazines tell you to send editors to find out if they are interested in a subject. We're less interested in the subject than in what you do with it. If at all possible, please send us the manuscript.*

Exception: You have found an interesting and complex subject that would take a lot of time and work to write about. If you want to know if we might be interested before proceeding, write a detailed, fact-filled letter about what you know and what you want to do, and send samples of your writing. The details and the samples might make it possible for us to make an intelligent reply. But in every case, it's better to send a manuscript than a query. (Please note: WER *doesn't have a budget for "kill fees," so all submissions are on spec.)*

7. ***Notes on reviews.*** *Write to that smart ignorant friend, introduce the book or whatever and get out of the way. A paragraph should usually be enough. In book reviews, the quotes are the thing — ideally they should be immediately useful and contain the soul of the book. You don't have to type the quotes, just note page numbers. It's not necessary to analyze the book; just say exactly why you love it. It can take a long time to get a final decision from us on a book review. We don't decide about printing it until we've seen the book, which we order from the publisher, who may take a couple of months to send it. (Don't you send the book unless you don't want it back; it's hard enough to deal with returning manuscripts.) If we decide not to use your review, you won't hear further from us. If we do use it, you'll receive a check and tear sheet upon publication.*

We like to review books of all ages, especially unheard-of wonders that got lost in some shuffle.

8. ***Photographs for articles.*** *The best by far for us to work with are black-and-white prints (either matte or glossy finish) that are 5x7 or 8x10 inches. We can make do with 3x5s. Never send your negatives unless we ask for them.*

9. ***Money and rights.*** *We pay upon publication for everything we use. $15 for letters, $30 for photos, and $100 to $500 for articles. The article money varies depending on length, wonderfulness, and provision of illustrations. Item, book, and software reviews work like this — you get $20 for being the first to suggest an item and $20 for reviewing it. If you do both, you get $40.*

WER *buys first-use rights on material, though we reserve the option to reprint things in the* Whole Earth Catalogs *or our "Whole Earth" newspaper column. (If we reprint you'll receive another fee.) Contributors retain all other rights.*

10. ***Will you still love us*** *if we reject your offering? Editing is arbitrary. It's hard to explain why any given piece is rejected. To understand that, picture yourself leafing through a magazine, not liking an article, and suddenly being confronted by the author who wants you to explain why you didn't like the article. A cogent explanation would be somewhere between awkward and impossible and definitely time-consuming. Our rejection notes tend to be short. It has to be that way if we're to have time to read all the mail carefully. If we turn down your piece, we may not convey in the note that we are grateful for all mail, that mail is all we've got, that the magazine would not exist if it weren't for mail from strangers who are good enough to share the wonders of their world with us.*

We're waiting to hear from you. ■

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Ice carvings at the first International Ice Sculpture Contest in Harbin, Manchuria, northern China.

(Above) The main gates to the festival. As the structure is layered by cementing blocks of ice with water, small recesses are chiseled to hold wires and electric lights. (Right) Two of many free-form entries erected in the city's park. Rasps and files shave the ice, roughing in general features. The heat from gas torches and soldering irons glazes the icy surfaces, removing abrasion marks and creating a lustrous sparkle. Full-size log cabins, Mississippi River paddle-wheelers, and working arched bridges are built entirely with frozen water.

Photographed by Douglas Yates. See page 119 for a brief travelog concerning the pictures.